PLINY

NATURAL HISTORY

IX

LIBRI XXXIII–XXXV

PLINY

NATURAL HISTORY

WITH AN ENGLISH TRANSLATION
IN TEN VOLUMES

VOLUME IX

LIBRI XXXIII–XXXV

BY

H. RACKHAM, M.A.
FELLOW OF CHRIST'S COLLEGE, CAMBRIDGE

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INTRODUCTION

Books XXXIII, XXXIV, and XXXV of Pliny's Natural History contain interesting accounts of minerals and mining and of the history of art.

Mr. H. Rackham left when he died a translation in typescript with a few footnotes. The Latin text has been prepared by Prof. E. H. Warmington, who has also added the critical notes on this text, many footnotes on the translation, and marginal helps. Some parts of the translation were completely re-written by him. The sections on Greek art were read and criticised by Prof. T. B. L. Webster, to whom thanks are now duly rendered.

The *codices* cited in the critical notes on the Latin text are as follows: *B* = Bambergensis; *cd. Leid. Voss.* = V; *cd. Leid. Lips.* = F; *cd. Chiffl(etianus)* = f; *cd. Flor. Ricc.* = R; *cd. Par. Lat.* 6797 = d; *cd. Par.* 6801 = h; *cd. Vind.* CCXXXIV = a; *cd. Tolet.* = T.

PLINY:
NATURAL HISTORY
BOOK XXXIII

PLINII NATURALIS HISTORIAE

LIBER XXXIII

I. Metalla nunc ipsaeque opes et rerum pretia dicentur, tellurem intus exquirente cura multiplici modo, quippe alibi divitiis foditur[1] quaerente vita aurum, argentum, electrum, aes, alibi deliciis gemmas et parietum lignorumque[2] pigmenta, alibi temeritati ferrum, auro etiam gratius inter bella caedesque. persequimur omnes eius fibras vivimusque super excavatam, mirantes dehiscere aliquando aut intremescere illam, ceu vero non hoc indignatione sacrae
2 parentis exprimi possit. imus in viscera et in sede manium opes quaerimus, tamquam parum benigna fertilique qua calcatur;[3] et inter haec minimum remediorum gratia scrutamur, quoto enim cuique fodiendi causa medicina est? quamquam et hoc summa sui parte tribuit ut fruges, larga facilisque in

[1] *ante* quippe *transferendum aut* fodinis *vel* e fodinis *legendum coni. Mayhoff.*

[2] lignorumque (*vel* signorumque) *Mayhoff*: pictorum *Detlefsen*: digitorumque *cdd.* (*recte*?): deliciis parietum digitorumque gemmas et pigmenta *Bergk.*

[3] *V.ll.* caecatur, cecatur, secatur.

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[a] *Electrum*, properly amber, was a word applied to an alloy of gold and silver, and also to native argentiferous gold, because of their resemblance in colour.

PLINY: NATURAL HISTORY

BOOK XXXIII

I. Our topic now will be metals, and the actual resources employed to pay for commodities—resources diligently sought for in the bowels of the earth in a variety of ways. For in some places the earth is dug into for riches, when life demands gold, silver, silver-gold [a] and copper, and in other places for luxury, when gems and colours for tinting walls and beams are demanded, and in other places for rash valour, when the demand is for iron, which amid warfare and slaughter is even more prized than gold. We trace out all the fibres of the earth, and live above the hollows we have made in her, marvelling that occasionally she gapes open or begins to tremble—as if forsooth it were not possible that this may be an expression of the indignation of our holy parent! We penetrate her inner parts and seek for riches in the abode of the spirits of the departed, as though the part where we tread upon her were not sufficiently bounteous and fertile. And amid all this the smallest object of our searching is for the sake of remedies for illness, for with what fraction of mankind is medicine the object of this delving? Although medicines also earth bestows upon us on her surface, as she bestows corn, bountiful and *Metals.*

3 omnibus, quaecumque prosunt. illa nos peremunt, illa nos ad inferos agunt, quae occultavit atque demersit, illa, quae non nascuntur repente, ut [1] mens ad inane evolans reputet, quae deinde futura sit finis omnibus saeculis exhauriendi eam, quo usque penetratura avaritia. quam innocens, quam beata, immo vero etiam delicata esset vita, si nihil aliunde quam supra terras concupisceret, breviterque, nisi [2] quod secum est!

4 II. Eruitur aurum et chrysocolla iuxta, ut pretiosior videatur, nomen ex auro custodiens. parum enim erat unam vitae invenisse pestem, nisi in pretio esset auri etiam sanies. quaerebat argentum avaritia; boni consuluit interim invenisse minium rubentisque terrae excogitavit usum. heu prodiga ingenia, quot modis auximus pretia rerum! accessit ars picturae, et aurum argentumque caelando carius fecimus. didicit homo naturam provocare. auxere et artem vitiorum inritamenta; in poculis libidines
5 caelare iuvit ac per obscenitates bibere. abiecta deinde sunt haec ac [3] sordere coepere, ut [4] auri argentique nimium fuit. murrina ex eadem tellure et crystallina effodimus, quibus pretium faceret ipsa fragilitas. hoc argumentum opum, haec vera luxu-

[1] repente ut *Mayhoff*: ut repente *aut* repente.
[2] *V.l.* haberetque non nisi.
[3] ac *Mayhoff*: abs *B*: et *rell.*
[4] ut *Mayhoff*: et.

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[a] Χρυσοκόλλα, 'gold-solder.' This is malachite, basic copper carbonate.
[b] See §§ 111 ff.
[c] Or possibly finest agate.

generous as she is in all things for our benefit! The things that she has concealed and hidden underground, those that do not quickly come to birth, are the things that destroy us and drive us to the depths below; so that suddenly the mind soars aloft into the void and ponders what finally will be the end of draining her dry in all the ages, what will be the point to which avarice will penetrate. How innocent, how blissful, nay even how luxurious life might be, if it coveted nothing from any source but the surface of the earth, and, to speak briefly, nothing but what lies ready to her hand!

Gold. II. Gold is dug out of the earth and in proximity to it gold-solder, which still retains in Greek a name [a] derived from gold, so as to make it appear more precious. It was not enough to have discovered one bane to plague life, without setting value even on the corrupt humours of gold! Avarice was seeking for silver, but counted it a gain to have discovered cinnabar [b] by the way, and devised a use to make of red earth. Alas for the prodigality of our inventiveness! In how many ways have we raised the prices of objects! The art of painting has come in addition, and we have made gold and silver dearer by means of engraving! Man has learnt to challenge nature in competition! The enticements of the vices have augmented even art: it has pleased us to engrave scenes of licence upon our goblets, and to drink through the midst of obscenities. Afterwards these were flung aside and began to be held of no account, when there was an excess of gold and silver. Out of the same earth we dug supplies of fluor-spar [c] and crystal, things which their mere fragility rendered costly. It came to be deemed the proof

riae gloria existimata est, habere quod posset statim perire totum. nec hoc fuit satis. turba gemmarum potamus et zmaragdis teximus calices, ac temulentiae causa tenere Indiam iuvat. aurum iam accessio est.

6 III. utinamque posset e vita in totum abdicari [sacrum fame, ut celeberrimi auctores dixere][1] proscissum conviciis ab optimis quibusque et ad perniciem vitae repertum, quanto feliciore aevo, cum res ipsae permutabantur inter sese, sicut et Troianis temporibus factitatum Homero credi convenit! ita enim, ut opinor, commercia victus gratia inventa.[2]

7 alios coriis boum, alios ferro captivisque res [3] emptitasse tradit. quare,[4] quamquam ipse iam mirator auri,[5] pecore [6] aestimationes rerum ita fecit, ut c boum arma aurea permutasse Glaucum diceret cum Diomedis armis VIIII boum. ex qua consuetudine multa legum antiquarum pecore constat etiam Romae.

8 IV. Pessimum vitae scelus fecit qui primus induit digitis, nec hoc quis fecerit traditur. nam de Prometheo omnia fabulosa arbitror, quamquam illi quoque ferreum anulum dedit antiquitas vinculumque id, non gestamen, intellegi voluit. Midae quidem anulum, quo circumacto habentem nemo cerneret,

[1] *Seclusit J. Müller.*

[2] inventa *cd. Par.* 6801 : invecta *rell.*

[3] res *Detlefsen* : merum *coni. Ian* : vinum *Bergk* : rebus *codd.* (rerus B^1 : rerū B^2).

[4] quare *Mayhoff* : quā B^2 : quā B^1 : *om. rell.*

[5] *V.l.* miratus auri.

[6] pecore *Mayhoff* : pec : B^1 pec B^2 : et *aut om. rell.*

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[a] The MSS. here insert a clause (' accursed by hunger, as very famous writers have said ') adapted from Virgil's famous phrase in *Aen.* III. 57 : ' auri sacra fames.'

of wealth, the true glory of luxury, to possess something that might be absolutely destroyed in a moment. Nor was this enough: we drink out of a crowd of precious stones, and set our cups with emeralds, we take delight in holding India for the purpose of tippling, and gold is now a mere accessory. III. And would that it [a] could be entirely banished from life, reviled and abused as it is by all the worthiest people, and only discovered for the ruin of human life—how far happier was the period when goods themselves were interchanged by barter, as it is agreed we must take it from Homer [b] to have been the custom even in the days of Troy. That in my view was the way in which trade was discovered, to procure the necessities of life. Homer relates how some people used to make their purchases with ox-hides, others with iron and captives, and consequently, although even Homer himself [c] was already an admirer of gold, he reckoned the value of goods in cattle, saying that Glaucus exchanged gold armour worth 100 beeves with that of Diomede worth 9 beeves. And as a result of this custom even at Rome a fine under the old laws is priced in cattle.

IV. The worst crime against man's life was committed by the person who first put gold on his fingers, though it is not recorded who did this, for I deem the whole story of Prometheus mythical, although antiquity assigned to him also an iron ring, and intended this to be understood as a fetter, not an ornament. As for the story of Midas's ring, which when turned round made its wearer invisible, *Gold rings*

[b] Homer, *Il.* VII. 472 ff.
[c] *Il.* VI. 234–6.

9 quis non etiam fabulosiorem fateatur? manus et prorsus sinistrae maximam auctoritatem conciliavere auro, non quidem Romanae, quarum [1] in more ferrei erant ut [2] virtutis bellicae insigne.

De regibus Romanis non facile dixerim. nullum habet Romuli in Capitolio statua nec praeter Numae Serviique Tullii alia ac ne Lucii quidem Bruti. hoc in Tarquiniis maxime miror, quorum e Graecia fuit origo, unde hic anulorum usus venit, quamquam
10 etiam nunc Lacedaemone ferreo utuntur. sed a Prisco Tarquinio omnium primo filium, cum in praetextae annis occidisset hostem, bulla aurea donatum constat, unde mos bullae duravit, ut eorum, qui equo meruissent, filii insigne id haberent, ceteri lorum; et ideo miror Tarquinii eius statuam sine anulo esse. quamquam et de nomine ipso ambigi video. Graeci a digitis appellavere, apud nos prisci ungulum vocabant, postea et Graeci et nostri
11 symbolum. longo certe tempore ne senatum quidem

[1] romani quorum *cd. Par.* 6801.
[2] ut *Hardouin*: et.

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[a] *Sinistra* suggests 'unlucky,' 'sinister.'
[b] One of the two first consuls (509 B.C.), not a king.
[c] The white toga with a purple border worn by free-born boys at Rome until they were declared to be of age, between 14 and 16, and assumed the *toga pura* or *virilis*, the white woollen cloak of the Roman citizen.
[d] Δακτύλιος, from δάκτυλος.

who would not admit this to be more mythical still? It was the hand and what is more the left [a] hand, that first won for gold such high esteem; not indeed a Roman hand, whose custom it was to wear an iron ring as an emblem of warlike valour.

Rings and brooches in the Roman monarchic period;

As to the Roman kings I find it hard to make a statement. The statue of Romulus in the Capitol has nothing, nor has any other king's statue excepting those of Numa and Servius Tullius, and not even that of Lucius Brutus.[b] I am especially surprised at this in the case of the Tarquins, who came originally from Greece, the country from which this fashion in rings came, although an iron ring is worn in Sparta even at the present day. But of all, Tarquinius Priscus, it is well known, first presented his son with a golden amulet when while still of an age to wear the bordered robe [c] he had killed an enemy in battle; and from that time on the custom of the amulet has continued as a distinction to be worn by the sons of those who have served in the cavalry, the sons of all others only wearing a leather strap. Owing to this I am surprised that the statue of that Tarquin has no ring. All the same, I notice that there is a difference of opinion even about the actual word for a ring. The Greek name [d] for it is derived from the word meaning a finger; with ourselves, in early days it was called 'ungulus,' [e] but afterwards both our people and the Greeks give it the name of 'symbolum.' [f] For a long period indeed, it is quite

[e] The word survives in fragments of early poetry.

[f] Greek σύμβολον, originally meaning two parts of a coin or other object broken in half to serve as a means of identification because tallying when put together; and so the word was used to denote any token or symbol.

Romanum habuisse aureos manifestum est, siquidem iis tantum, qui legati ad exteras gentes ituri essent, anuli publice dabantur, credo, quoniam ita exterorum honoratissimi intellegebantur. neque aliis uti mos fuit quam qui ex ea causa publice accepissent, volgoque sic triumphabant et, cum corona ex auro Etrusca sustineretur a tergo, anulus tamen in digito ferreus erat aeque triumphantis et servi prae [1] se coronam sus-
12 tinentis. sic triumphavit de Iugurtha C. Marius aureumque non ante tertium consulatum sumpsisse traditur. ii quoque, qui ob legationem acceperant aureos, in publico tantum utebantur iis, intra domos vero ferreis, quo argumento etiam nunc sponsae muneris vice ferreus anulus mittitur, isque sine gemma. equidem nec Iliacis temporibus ullos fuisse anulos video. nusquam certe Homerus dicit, cum et codicillos missitatos epistularum gratia indicet et conditas arcis vestes ac vasa aurea argenteaque et eas colligatas [2] nodi, non anuli, nota. sortiri quoque contra provocationes duces non anulis tradit, fabricae etiam deum fibulas et alia muliebris cultus, sicut

[1] prae se *Mayhoff* (*qui et* forte *coni.*): fortasse *cdd.*: *del. edd. vett.*

[2] consignatas *coni. Mayhoff.*

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[a] *I.e.* by the future bridegroom; it was called *anulus pronubus*.

[b] *Il.* VI. 168–9.

[c] *Od.* VIII. 424, 438–41, 443, 447.

[d] *Il.* VII. 171, 175; κλῆροι 'lots,' were moulded out of clay, but it is not said that they were marked with the chiefs' signet rings.

[e] Hephaestus. See *Il.* XVIII. 400 ff.

clear, not even members of the Roman senate had gold rings, inasmuch as rings were bestowed officially on men about to go as envoys to foreign nations, and on them only, the reason no doubt being that the most highly honoured foreigners were recognized in this way. Nor was it the custom for any others to wear a gold ring than those on whom one had been officially bestowed for the reason stated; and customarily Roman generals went in triumph without one, and although a Tuscan crown of gold was held over the victor's head from behind, nevertheless he wore an iron ring on his finger when going in triumph, just the same as the slave holding the crown in front of himself. This was the way in which Gaius Marius celebrated his triumph over Jugurtha, and it is recorded that he did not assume a gold ring till his third tenure of the consulship. Those moreover who had been given gold rings because they were going on an embassy only wore them in public, but in their homes wore iron rings; this is the reason why even now an iron ring and what is more a ring without any stone in it is sent [a] as a gift to a woman when betrothed. Indeed I do not find that any rings were worn in the Trojan period; at all events Homer nowhere mentions them, although he shows that tablets [b] used to be sent to and fro in place of letters, and that clothes and gold and silver vessels were stored away in chests [c] and were tied up with signet-knots, not sealed with signet-rings. Also he records the chiefs as casting lots about meeting a challenge from the enemy without using signet-rings [d]; and he also says that the god [e] of handicraft in the original period frequently made brooches and other articles of

and in the Republican period.

Jan. 1, 104 B.C. 103 B.C.

Rings in Homer.

inaures, in primordio factitasse, sine mentione 13 anulorum. et quisquis primus instituit, cunctanter id fecit: laevis manibus latentibusque induit, cum, si honos securus fuisset, dextra fuerit ostentandus. quodsi impedimentum potuit in eo aliquod intellegi, etiam serioris usus argumentum est:[1] maius in laeva fuisset, qua scutum capitur. est quidem apud eundem Homerum virorum crinibus aurum inplexum; ideo nescio an prior usus feminis coeperit.

14 V. Romae ne fuit quidem aurum nisi admodum exiguum longo tempore. certe cum a Gallis capta urbe pax emeretur, non plus quam mille pondo effici potuere. nec ignoro MM pondo auri perisse Pompeii III consultu e Capitolini Iovis solio a Camillo ibi condita, et ideo a plerisque existimari MM pondo collata. sed quod accessit, ex Gallorum praeda fuit detractumque ab iis in parte captae urbis delubris— 15 Gallos cum auro pugnare solitos Torquatus indicio est—; apparct ergo Gallorum templorumque tantundem nec amplius fuisse. quod quidem in

[1] est *cdd.* (est et *B*): esset *Mayhoff.*

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[a] *Il.* XVII. 52.
[b] Victor over the Gauls in 390 B.C.
[c] T. Manlius obtained this surname from the gold necklace, *torques*, which he took from a Gaul whom he slew in single combat in 360 B.C.

feminine finery like earrings—without mentioning finger-rings. And whoever first introduced them did so with hesitation, and put them on the left hand, which is generally hidden by the clothes, whereas it would have been shown off on the right hand if it had been an assured distinction. And if this might possibly have been thought to involve some interference with the use of the right hand, there is the proof of more modern custom; it would have also been more inconvenient to wear it on the left hand, which holds the shield. Indeed it is also stated, by Homer [a] again, that men wore gold plaited in their hair and consequently I cannot say whether the use of gold originated from women.

Roman wealth in gold.

V. At Rome for a long time gold was actually not to be found at all except in very small amounts. At all events when peace had to be purchased after the capture of the City by the Gauls, not more than a thousand pounds' weight of gold could be produced. I am aware of the fact that in Pompey's third consulship there was lost from the throne of Jupiter of the Capitol two thousand pounds' weight of gold that had been stored there by Camillus,[b] which led to a general belief that 2000 pounds was the amount that had been accumulated. But really the additional sum was part of the booty taken from the Gauls, and it had been stripped by them from the temples in the part of the city which they had captured—the case of Torquatus [c] shows that the Gauls were in the habit of wearing gold ornaments in battle; therefore it appears that the gold belonging to the Gauls and that belonging to the temples did not amount to more than that total; and this in fact was taken to be the meaning contained in the

390 B.C.

52 B.C.

augurio intellectum est, cum Capitolinus duplum reddidisset.

Illud quoque obiter indicari convenit—etiam[1] de anulis sermonem repetivimus—, aedituum custodiae eius conprehensum fracta in ore anuli gemma statim
16 expirasse et indicium ita extinctum. ergo vel[2] maxime MM tantum pondo, cum capta est Roma, anno CCCLXIIII fuere, cum iam capitum liberorum censa essent $\overline{\text{CLII}}$ DLXXIII. in eadem post annos CCCVII, quod ex Capitolinae aedis incendio ceterisque omnibus delubris C. Marius filius Praeneste detulerat,[3] $\overline{\text{XIIII}}$[4] pondo, quae sub eo titulo in triumpho transtulit Sulla et argenti $\overline{\text{VI}}$.[5] idem ex reliqua omni victoria pridie transtulerat auri pondo $\overline{\text{XV}}$, argenti p. $\overline{\text{CXV}}$.

17 VI. Frequentior autem usus anulorum non ante Cn. Flavium Anni filium deprehenditur. hic namque publicatis diebus fastis, quos populus a paucis principum cotidie petebat, tantam gratiam plebei adeptus est—libertino patre alioqui genitus et ipse scriba Appi Caeci, cuius hortatu exceperat eos dies consultando adsidue sagaci ingenio promulgaratque

[1] etiam *B*: quoniam *rell.*: et iam *Ian*: etenim *coni. Mayhoff.*

[2] vel *L. C. Purser*: ut.

[3] detulerat, erant *coni. Mayhoff.*

[4] $\overline{\text{XIIII}}$ *Ian*: XIIII *B*: XIII *rell.* (tredecim milia *cd. Par.* 6801).

[5] $\overline{\text{VI}}$ *Ian*: VI.

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[a] The reference has not been explained.

[b] It contained a poison, cf. § 26.

[c] By the Gauls in 390 B.C.

[d] Appius Claudius, censor in 312 B.C. and builder of the Appian Way.

augury,[a] when Jupiter the God of the Capitol had repaid twofold.

Also, as we began on this topic from the subject of rings, it is suitable incidentally to point out that the official in charge of the temple of Jupiter of the Capitol when he was arrested broke the stone [b] of his ring between his teeth and at once expired, so putting an end to any possibility of proving the theft. It follows that there was only 2,000 lbs. weight of gold at the outside when Rome was captured in its 364th year,[c] although the census showed there were already 152,573 free citizens. From the same city 307 years later the gold that Gaius Marius 82 B.C. the younger had conveyed to Palestrina from the conflagration of the temple of the Capitol and from all the other shrines amounted to 14,000 lbs., which with a placard above it to that effect was carried along in his triumphal procession by Sulla, as well as 81 B.C. 6,000 lbs. weight of silver. Sulla had likewise on the previous day carried in procession 15,000 lbs. of gold and 115,000 lbs. of silver as the proceeds of all the rest of his victories.

More about rings in the Republican period.

VI. It does not appear that rings were in more common use before the time of Gnaeus Flavius son of Annius. It was he who first published the dates for legal proceedings, which it had been customary 305–4 B.C. for the general public to ascertain by daily enquiry from a few of the leading citizens; and this won him such great popularity with the common people—he was also the son of a liberated slave and himself a clerk to Appius Caecus,[d] at whose request he had by dint of natural shrewdness through continual observation picked out those days and published them—that he was appointed a curule

—, ut aedilis curulis crearetur cum Q. Anicio Praenestino, qui paucis ante annis hostis fuisset, praeteritis C. Poetilio et Domitio, quorum patres consules
18 fuerant. additum Flavio, ut simul et tribunus plebei esset, quo facto tanta indignatio exarsit, ut anulos abiectos in antiquissimis reperiatur annalibus. fallit plerosque quod tum et equestrem ordinem id fecisse arbitrantur; etenim adiectum hoc quoque sed et phaleras positas propterque hoc nomen equitum adiectum est, anulosque depositos a nobilitate in annales relatum est, non a senatu universo. hoc actum P.
19 Sempronio L. Sulpicio cos. Flavius vovit aedem Concordiae, si populo reconciliasset ordines, et, cum ad id pecunia publice non decerneretur, ex multaticia faeneratoribus condemnatis aediculam aeream fecit in Graecostasi, quae tunc supra comitium erat, inciditque in tabella aerea factam eam aedem
20 cciiii annis post Capitolinam dedicatam. id a.[2] ccccxxxxviiii a condita urbe gestum est et primum anulorum vestigium extat; promiscui autem usus alterum secundo Punico bello, neque enim aliter

[1] propterque hoc *Rackham*: *alii alia*: propterque.
[2] id a. (anno) *C. F. W. Müller*: ita.

[a] Probably in the war with the twelve tribes of Etruria, who were conquered by Fabius at Lake Vadimo, 310 B.C.
[b] A platform Greek and, later, any foreign envoys could watch proceedings. It was later placed in the Forum.

ædile as a colleague of Quintus Anicius of Palestrina, who a few years previously had been an enemy at war with Rome,[a] while Gaius Poetilius and Domitius, whose fathers had been consuls, were passed over. Flavius had the additional advantage of being tribune of the plebs at the same time. This caused such an outburst of blazing indignation that we find in the oldest annals 'rings were laid aside.' The common belief that the Order of Knighthood also did the same on this occasion is erroneous, inasmuch as the following words were also added: 'but also harness-bosses were put aside as well'; and it is because of this clause that the name of the Knights has been added; and the entry in the annals is that the rings were laid aside by the nobility, not by the entire Senate. This occurrence took place in the consulship of Publius Sempronius 305 B.C.
and Lucius Sulpicius. Flavius made a vow to erect a temple to Concord if he succeeded in effecting a reconciliation between the privileged orders and the people; and as money was not allotted for this purpose from public funds, he drew on the fine-money collected from persons convicted of practising usury to erect a small shrine made of bronze on the Graecostasis,[b] which at that date stood above the Assembly-place, and put on it an inscription engraved on a bronze tablet that the shrine had been constructed 204 years after the consecration of the Capitoline temple. This event took place in the 449th year from the foundation of the city, and 305 B.C.
is the earliest evidence to be found of the use of rings. There is however a second piece of evidence for their being commonly worn at the time of the Second Punic War, as had this not been the case it

potuisset trimodia anulorum illa Carthaginem ab Hannibale mitti. inter Caepionem quoque et Drusum ex anulo in auctione venali intimicitiae coepere,
21 unde origo socialis belli et exitia rerum. ne tunc quidem omnes senatores habuere, utpote cum memoria avorum multi praetura quoque functi in ferreo consenuerint—sicut Calpurnium et Manilium, qui legatus C. Marii fuerit Iugurthino bello, Fenestella tradit, et multi L. Fufidium illum, ad quem Scaurus de vita sua scripsit—, in Quintiorum vero familia aurum ne feminas quidem habere mos fuerit, nullosque omnino maior pars gentium hominumque, etiam qui sub imperio nostro degunt, hodieque habeat. non signat oriens aut Aegyptus etiam nunc litteris contenta solis.

22 Multis hoc modis, ut cetera omnia, luxuria variavit gemmas addendo exquisiti fulgoris censuque opimo digitos onerando, sicut dicemus in gemmarum volumine, mox et effigies varias caelando, ut alibi ars, alibi materia esset in pretio. alias dein gemmas violari nefas putavit ac, ne quis signandi causam in
23 anulis esse intellegeret, solidas induit. quasdam

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[a] This was after the battle of Cannae in 216 B.C. Livy says 3½ pecks, Florus says 2.

[b] The so-called Social War, 91–88 B.C.

[c] This statement is untrue.

would not have been possible for the three [a] pecks of rings as recorded to have been sent by Hannibal to Carthage. Also it was from a ring put up for sale by auction that the quarrel between Caepio and Drusus began which was the primary cause of the war with the allies [b] and the disasters that sprang from it. Not even at that period did all members of the senate possess gold rings, seeing that in the memory of our grandfathers many men who had even held the office of prætor wore an iron ring to the end of their lives—for instance, as recorded by Fenestella, Calpurnius and Manilius, the latter having been lieutenant-general under Gaius Marius in the war 112-106 B.C. with Jugurtha, and, according to many authorities, the Lucius Fufidius to whom Scaurus dedicated his Autobiography—while another piece of evidence is that in the family of the Quintii it was not even customary for the women to have a gold ring, and that the greater part of the races of mankind, and even of the people who live under our empire and at the present day, possess no rings at all. The East and Egypt do not [c] seal documents even now, but are content with a written signature.

Methods of wearing rings.

This fashion like everything else luxury has diversified in numerous ways, by adding to rings gems of exquisite brilliance, and by loading the fingers with a wealthy revenue (as we shall mention in our book on gems) and then by engraving on them a variety of devices, so that in one case the craftsmanship and in another the material constitutes the value. Then again with other gems luxury has deemed it sacrilege for them to undergo violation, and has caused them to be worn whole, to prevent anybody's imagining that people's finger-rings were intended for

XXXVII. 2 sqq.

vero neque ab ea parte, qua digito occultantur,[1] auro clusit aurumque millis[2] lapillorum vilius fecit. contra vero multi nullas admittunt gemmas auroque ipso signant. id Claudii Caesaris principatu repertum. nec non et servitia iam ferrum auro cingunt—alia per sese mero auro decorant—, cuius licentiae origo nomine ipso in Samothrace id institutum declarat.

24 Singulis primo digitis geri mos fuerat, qui sunt minimis proximi. sic in Numae et Servi Tullii statuis videmus. postea pollici proximo induere, etiam in[3] deorum simulacris, dein iuvit et minimo dare. Galliae Brittanniaeque medio dicuntur usae. hic nunc solus excipitur, ceteri omnes onerantur, atque
25 etiam privatim articuli minoribus aliis. sunt qui uni tantum minimo congerant, alii vero et huic tantum unum, quo signantem signent. conditus ille, ut res rara et iniuria usus indigna, velut e sacrario promitur, ut et unum in minimo digito habuisse pretiosioris in recondito supellectilis ostentatio sit. iam alii pondera eorum ostentant. aliis plures quam unum gestare labor est, alii bratteas

[1] *V.l.* quae digito occultatur.
[2] millis *Ian*: micis *Gronov*: vilibus *coni. Urlichs*: millib. *B*[1]: milibus.
[3] in *add. Mayhoff.*

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[a] Or possibly 'that finger-rings contained a motive for sealing documents,' *i.e.*, that people were ready to seal deeds in order to show off the engraved stones.
[b] Slaves wore iron rings, a symbol of captivity.
[c] *I.e.* they were called Samothracian rings.

sealing documents![a] Some gems indeed luxury has left showing in the gold even on the side of the ring that is hidden by the finger, and has cheapened the gold with collars of little pebbles. But on the contrary many people do not allow any gems in a signet-ring, and seal with the gold itself; this was a fashion invented when Claudius Cæsar was emperor. A.D. 41–51. Moreover even slaves nowadays encircle the iron of their rings[b] with gold (other articles all over them they decorate with pure gold), an extravagance the origin of which is shown by its actual name[c] to have been instituted in Samothrace.

It had originally been the custom to wear rings on one finger only, the one next the little finger; that is how we see them on the statues of Numa and Servius Tullius. Afterwards people put them on the finger next the thumb, even in the case of statues of the gods, and next it pleased them to give the little finger also a ring. The Gallic Provinces and the British Islands are said to have used the middle finger. At the present day this is the only finger exempted, while all the others bear the burden, and even each finger-joint has another smaller ring of its own. Some people put all their rings on their little finger only, while others wear only one ring even on that finger, and use it to seal up their signet ring, which is kept stored away as a rarity not deserving the insult of common use, and is brought out from its cabinet as from a sanctuary; thus even wearing a single ring on the little finger may advertise the possession of a costlier piece of apparatus put away in store. Some again show off the weight of their rings; others count it hard work to wear more than one; and others consider that filling the gold tinsel

infercire leviore materia propter casum tutius gemmarum sollicitudini putant, alii sub gemmis venena cludunt, sicut Demosthenes summus Graeciae orator,
26 anulosque mortis gratia habent. denique vel [1] plurima opum scelera anulis fiunt. quae fuit illa vita priscorum, qualis innocentia, in qua nihil signabatur! nunc cibi quoque ac potus anulo vindicantur a rapina. hoc profecere mancipiorum legiones, in domo turba externa ac iam servorum quoque causa nomenclator adhibendus. aliter apud antiquos singuli Marcipores Luciporesve dominorum gentiles omnem victum in promiscuo habebant, nec ulla domi a domesticis
27 custodia opus erat. nunc rapiendae conparantur epulae pariterque qui rapiant eas, et claves quoque ipsas signasse non est satis. gravatis somno aut morientibus anuli detrahuntur, maiorque vitae ratio circa hoc instrumentum esse coepit, incertum a quo tempore. videmur tamen posse in externis auctoritatem eius rei intellegere circa Polycraten Sami tyrannum, cui dilectus ille anulus in mare abiectus capto relatus est pisce, ipso circiter CCXXX urbis

[1] vel *Bergk*: ut.

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[a] Plutarch, *Vit. Demosth.* 29 reports a statement that Demosthenes always carried a poison in a bracelet on his arm, and that he killed himself with it to avoid falling into the hands of Antipater of Macedon, 322 B.C.

[b] *I.e.* documents are forged and sealed with faked signet-rings.

[c] He was put to death *c.* 515 B.C. by the Persian Oroetes.

of the circle with a lighter material, in case of their dropping, is a safer precaution for their anxiety about their gems; others enclose poisons underneath the stones in their rings, as did Demosthenes,[a] the greatest orator of Greece, and they wear their rings as a means of taking their own lives. Finally, a very great number of the crimes connected with money are carried out by means of rings.[b] To think what life was in the days of old, and what innocence existed when nothing was sealed! Whereas nowadays even articles of food and drink have to be protected against theft by means of a ring: this is the progress achieved by our legions of slaves—a foreign rabble in one's home, so that an attendant to tell people's names now has to be employed even in the case of one's slaves! This was not the way with by-gone generations, when a single servant for each master, a member of his master's clan, Marcius's boy or Lucius's boy, took all his meals with the family in common, nor was there any need of precautions in the home to keep watch on the domestics. Nowadays we acquire sumptuous viands only to be pilfered and at the same time acquire people to pilfer them, and it is not enough to keep our keys themselves under seal: while we are fast asleep or on our death-beds, our rings are slipped off our fingers; and the more important concerns of our life have begun to centre round that tool, though when this began is doubtful. Still it seems we can realize the importance this article possesses abroad in the case of the tyrant of Samos, Polycrates, who flung his favourite ring into the sea and had it brought back to him inside a fish which had been caught: Polycrates himself was put to death[c]

28 nostrae annum interfecto. celebratior quidem usus cum faenore coepisse debet. argumento est consuetudo volgi, ad sponsiones etiamnum[1] anulo exiliente, tracta ab eo tempore, quo nondum erat arra velocior, ut plane adfirmare possimus nummos ante apud nos, mox anulos coepisse. de nummis paulo post dicetur.

29 VII. Anuli distinxere alterum ordinem a plebe, ut semel coeperant esse celebres, sicut tunica ab anulis senatum. quamquam et hoc sero, vulgoque purpura latiore tunicae usos invenimus etiam praecones, sicut patrem L. Aelii Stilonis Praeconini ob id cognominati. sed anuli plane tertium ordinem mediumque plebei et patribus inseruere, ac quod antea militares equi nomen dederant, hoc nunc pecuniae indices tribuunt. nec pridem id factum.
30 divo Augusto decurias ordinante maior pars iudicum in ferreo anulo fuit iique non equites, sed iudices vocabantur. equitum nomen subsistebat in turmis equorum publicorum. iudicum quoque non nisi quattuor decuriae fuere primo, vixque singula milia in decuriis inventa sunt, nondum provinciis ad hoc

[1] etiam nunc *coni. Mayhoff.*

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[a] 'Son of the herald.'
[b] *Eques.*

about the 230th year of the city of Rome. Still the employment of a signet-ring must have begun to be much more frequent with the introduction of usury. This is proved by the custom of the lower classes, among whom even at the present day a ring is whipped out when a contract is being made; the habit comes down from the time when there was as yet no speedier method of guaranteeing a bargain, so we can safely assert that with us money began first and signet-rings came in afterwards. About money we shall speak rather later. 523 B.C.

Wearing of rings by the Equestrian order.

VII. As soon as rings began to be commonly worn, they distinguished the second order from the commons, just as a tunic distinguished the senate from those who wore the ring, although this distinction also was only introduced at a late date, and we find that a wider purple stripe on the tunic was commonly worn even by heralds, for instance the father of Lucius Aelius Stilo Praeconinus, who received his surname [a] from his father's office. But wearing rings clearly introduced a third order, intermediate between the commons and the senate, and the title [b] that had previously been conferred by the possession of a war-horse is now assigned by money rates. This however is only a recent introduction: when his late lamented Majesty Augustus made regulations for the judicial panels the majority of the judges belonged to the iron ring class, and these used to be designated not Knights but Justices; the title of Knights remained with the cavalry squadrons mounted at the public charge. Of the Justices also there were at the first only four panels, and in each panel scarcely a thousand names were to be found, as the provinces had not yet been

munus admissis, servatumque in hodiernum est, ne
31 quis e novis civibus in iis iudicaret. decuriae quoque ipsae pluribus discretae nominibus fuere, tribunorum aeris et selectorum et iudicum. praeter hos etiamnum nongenti vocabantur ex omnibus electi ad custodiendas suffragiorum cistas in comitiis. et divisus hic quoque ordo erat superba usurpatione nominum, cum alius se nongentum, alius selectum, alius tribunum appellaret.

32 VIII. Tiberii demum principatu [1] nono anno in unitatem venit equester ordo, anulorumque auctoritati forma constituta est C. Asinio Pollione C. Antistio Vetere cos. anno urbis conditae DCCLXXV, quod miremur, futtili paene de causa, cum C. Sulpicius Galba, iuvenalem famam apud principem popinarum poenis aucupatus, questus esset in senatu, volgo institores eius culpae defendi anulis. hac de causa constitutum, ne cui ius esset nisi qui ingenuus ipse, ⟨ingenuo⟩ [2] patre, avo paterno HS $\overline{\text{CCCC}}$ census fuisset et lege Iulia theatrali in quattuordecim ordinibus
33 sedisset. postea gregatim insigne id adpeti coeptum.

[1] principatu *B*: principatus *rell.*
[2] ingenuus ipse ingenuo *Detlefsen*: qui ingenuus ipse *aut* cui ingenuo ipsi.

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[a] Originally it seems officials (tribuni aerarii) who collected the property-tax from Roman citizens (until 167 B.C.), and paid the soldiers out of a special fund. But in the first century B.C. they appear as an *ordo* in the state next below the *equites*.
[b] Tiberius.
[c] *I.e.* the gold ring of the Order of Knighthood, whose members often practised banking, tax-farming and other businesses.
[d] The financial standing of an *eques*.

admitted to this duty; and the regulation has survived to the present day that nobody newly admitted to citizenship shall serve as a justice on one of the panels. The panels themselves also were distinguished by various designations, as consisting of Tribunes of the Money,[a] Selected Members and Justices. Moreover beside these there were those styled the Nine Hundred, selected from the whole body as keepers of the ballot-boxes at elections. And the proud adoption of titles had made divisions in this order also, one person styling himself a member of the Nine Hundred, another one of the Select, another a Tribune.

VIII. Finally in the ninth year in office of the Emperor Tiberius the Order of Knights was united A.D. 14–37. into a single body; and in the Consulship of Gaius A.D. 22. Asinius Pollio and Gaius Antistius Vetus, in the 775th year since the foundation of Rome, a regulation was established authorizing who should wear rings; the motive for this, a thing that may surprise us, was virtually the futile reason that Gaius Sulpicius Galba had made a youthful effort to curry favour with the emperor [b] by enacting penalties for keeping eating-houses and had made a complaint in the senate that peddling tradesmen when charged with that offence commonly protected themselves by means of their rings.[c] Consequently a rule was made that nobody should have this right except one who was himself a free-born man whose father and father's father had been free-born also, and who had been rated as the owner of 400,000 sesterces [d] and had been entitled under the Julian law as to the theatre to sit in the fourteen front rows of seats. Subsequently people began to apply in crowds for this

propter haec discrimina C. princeps decuriam quintam adiecit, tantumque enatum est fastus, ut, quae sub divo Augusto impleri non potuerant, decuriae non capiant eum ordinem, passimque ad ornamenta ea etiam servitute liberati transiliant, quod antea numquam erat factum, quoniam[1] ferreo anulo et equites iudicesque intellegebantur. adeoque id promiscuum esse coepit, ut apud Claudium Caesarem in censura eius unus ex equitibus Flavius Proculus cccc ex ea causa reos postularet. ita dum separatur ordo ab
34 ingenuis, communicatus est cum servitiis. iudicum autem appellatione separare eum ordinem primi omnium instituere Gracchi discordi popularitate in contumeliam senatus, mox debellata auctoritas nominis vario seditionum eventu circa publicanos substitit et aliquamdiu tertiae sortis viri publicani fuere. M. Cicero demum stabilivit equestre nomen in consulatu suo Catilinianis rebus, ex eo ordine profectum se celebrans eiusque vires peculiari popularitate quaerens. ab illo tempore plane hoc tertium corpus in re p. factum est, coepitque adici senatui

[1] quoniam *Mayhoff*: qm̄ in.

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[a] In fact C. Gracchus, tribune 123–2 B.C.

mark of rank; and in consequence of these distinctions within the order the Emperor Gaius Caligula added a fifth panel, and so much conceit has this occasioned that the panels which under his late lamented Majesty Augustus it had not been possible to fill will not hold that order, and there are frequent cases of men who are actually liberated slaves making a leap over to these distinctions, a thing that previously never occurred, since the iron ring was the distinguishing mark even of knights and judges. And the thing began to be so common that during the censorship of the Emperor Claudius a member A.D. 48.
of the Order of Knighthood named Flavius Proculus laid before him information against 400 persons on this ground, so that an order intended to distinguish the holder from other men of free birth has been shared with slaves. It was the Gracchi[a] who first instituted the name of Justices or Judges as the distinguishing name of that order of knights—seditiously currying favour with the people in order to humiliate the senate; but subsequently the importance of the title of Knight was swamped by the shifting currents of faction, and came down to be attached to the farmers of public revenues, and for some time these revenue officers constituted the third rank in the state. Finally Marcus Cicero, thanks to the Catilinarian affair, during his consulship 63 B.C.
put the title of knighthood on a firm footing, boasting that he himself sprang from that order, and winning its powerful support by methods of securing popularity that were entirely his own. From that time onward the Knighthood definitely became a third element in the state, and the name of the Equestrian Order came to be added to the formula 'The

populoque Romano et equester ordo. qua de causa et nunc post populum scribitur, quia novissime coeptus est adici.

35 IX. Equitum quidem etiam nomen ipsum saepe variatum est, in iis quoque, qui id ab equitatu trahebant. celeres sub Romulo regibusque sunt appellati, deinde flexuntes, postea trossuli, cum oppidum in Tuscis citra Volsinios p. $\overline{\text{VIIII}}$ sine ullo peditum adiumento cepissent eius vocabuli, idque duravit
36 ultra C. Gracchum. Iunius certe, qui ab amicitia eius Gracchanus appellatus est, scriptum reliquit his verbis: Quod ad equestrem ordinem attinet, antea trossulos vocabant, nunc equites vocant ideo, quia non intellegunt trossulos nomen quid valeat, multosque pudet eo nomine appellari. et causam, quae supra indicata est, exponit invitosque etiamnum [1] tamen trossulos vocari.

37 X. Sunt adhuc aliquae non omittendae in auro differentiae. auxilia quippe et externos torquibus aureis donavere, at cives non nisi argenteis, praeterque armillas civibus dedere, quas non dabant externis.

38 XI. Iidem, quo magis miremur, coronas ex auro dedere et civibus. quis primus donatus sit ea, non

[1] etiamtum *coni. Mayhoff.*

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[a] But in fact the regular order of words was senate, equites, Roman people.

[b] Trossum or Trossulum; there are still remains of a town at Trosso, two miles from Monte Fiascone in Tuscany.

Senate and People of Rome.' This is the reason why it is even now written after [a] 'People,' because it was the latest addition introduced.

IX. Indeed the very name of the Knights has itself frequently been altered, even in the case of those who derived the title from the fact of their serving as cavalry. Under Romulus and the Kings they were called the Celeres, then the Flexuntes and afterwards the Trossuli, because of their having without any assistance from infantry captured a town of that name [b] in Tuscany nine miles this side of Volsinii; and the name survived till after the time of Gaius Gracchus. At all events in the writings left by Junius, who owing to his friendship with Gaius Gracchus was called Gracchanus, these words occur: 'So far as concerns the Equestrian Order they were previously called the Trossuli, but are now simply designated the Cavalry, because people do not know what the word Trossuli means and many of them are ashamed of being called by that name.' He goes on to explain the reason above indicated, and says that they were even in his time still called Trossuli, though they did not wish to be.

Necklaces.

X. There are some additional particulars in regard to gold which must not be omitted. For instance our authorities actually bestowed gold necklaces on foreign soldiers, but only awarded silver ones to Roman citizens, and what is more they gave bracelets to citizens, which it was not their custom to give to foreigners.

Crowns of gold.

XI. But at the same time, as is even more surprising, they gave crowns of gold even to citizens. Who was the first person to receive one I have not

inveni equidem; quis primus donaverit, a L. Pisone traditur: A. Postumius dictator apud lacum Regillum castris Latinorum expugnatis eum, cuius maxime opera capta essent. hanc coronam ex praeda is dedit II l.,[1] item L. Lentulus consul Servio Cornelio Merendae Samnitum oppido capto, sed hic quinque librarum; trium[2] Piso Frugi filium ex privata pecunia donavit eamque coronam testamento ei praelegavit.

39 XII. Deorum honoris causa in sacris nihil aliud excogitatum est quam ut auratis cornibus hostiae, maiores dumtaxat, immolarentur. sed in militia quoque in tantum adolevit haec luxuria, ut M. Bruti e Philippicis campis epistulae reperiantur frementis fibulas tribunicias ex auro geri. ita, Hercules? idem enim tu, Brute, mulierum pedibus aurum gestatum[3] tacuisti. et nos sceleris arguimus illum, qui primus auro dignitatem per anulos fecit! habeant in lacertis iam quidem et viri, quod ex Dardanis venit—itaque et Dardanium vocabatur;
40 viriolae Celtice dicuntur, viriae Celtiberice—; habeant feminae in armillis digitisque totis, collo, auribus, spiris; discurrant catenae circa latera et in secreto

[1] dedit II l. (*i.e.* librarum) *Mayhoff*: dedit *cdd.* (dedit l. B^1).
[2] trium *add. Hardouin coll. Val. Max.* IV.3.10.
[3] gestatum *B, cd. Colb.*: gestari *rell.*

myself been able to ascertain, but Lucius Piso records who was the first person to bestow one, namely the dictator Aulus Postumius, who when the camp of the Latins at Lake Regillus had been taken by storm awarded a gold crown to the soldier who had been chiefly responsible for taking the place. In this case the crown which he bestowed was made of gold taken from the booty captured, and weighed two pounds. Also Lucius Lentulus as consul awarded a gold crown to Servius Cornelius Merenda after the taking of a town belonging to the Samnites, but Servius's crown weighed five pounds; while Piso Frugi bestowed on his son one weighing three pounds out of his personal resources, leaving it to him by will as a specific legacy.

497 B.C.

275 B.C.

Further remarks about gold.

XII. As a mark of honour to the gods at sacrifices no other means has been devised but to gild the horns of the victims to be immolated, at all events of full-grown animals. But in military service also this form of luxury has grown to such dimensions that we find a letter of Marcus Brutus sent from the Plains of Philippi expressing his indignation at the brooches made of gold that were worn by the tribunes. Really I must protest! Why, even you, Brutus, did not mention the gold worn on their feet by women, and we accuse of crime the man who first conferred dignity on gold by using gold rings! Let even men nowadays wear gold bracelets—called 'Dardania' because the fashion came from the Dardani—the Celtic name for them is 'viriolae' and the Celtiberian 'viriae'; let women have gold in their bracelets and covering their fingers and on their neck, ears and tresses, let gold chains run at random round their waists; and let little bags of

42 B.C.

margaritarum sacculi e collo dominarum auro pendeant, ut in somno quoque unionum conscientia adsit: etiamne pedibus induetur atque inter stolam plebemque hunc medium feminarum equestrem ordinem faciet? honestius viri paedagogis id damus,
41 balineasque dives puerorum forma convertit.[1] iam vero et Harpocraten statuasque Aegyptiorum numinum in digitis viri quoque portare incipiunt. fuit et alia Claudii principatu differentia insolens iis, quibus admissiones[2] liberae[3] ius[4] dedissent[5] imaginem principis ex auro in anulo gerendi, magna criminum occasione, quae omnia salutaris exortus Vespasiani imperatoris abolevit aequaliter publicando principem. de anulis aureis usuque eorum hactenus sit dictum.
42 XIII. Proximum scelus fuit eius, qui primus ex auro denarium signavit, quod et ipsum latet auctore incerto. populus Romanus ne argento quidem signato ante Pyrrhum regem devictum usus est. libralis—unde etiam nunc libella dicitur et dupondius —adpendebatur assis; quare aeris gravis poena dicta, et adhuc expensa in rationibus dicuntur, item

[1] converrit *J. Müller.*
[2] admissiones *Mommsen*: admissionem *cdd. pler.*: admission//i//s *B*².
[3] liberae *B*: liberti *rell.*
[4] ius *Lips*: eius.
[5] dedisset *coni. Ian.*

[a] *I.e.* gold ornaments on the sandal-straps.
[b] Said to have been the Egyptian god of silence.
[c] *I.e.* committed against the welfare of mankind. The worst crime was the introduction of gold rings, § 8.
[d] Equal in value to 25 silver denarii.
[e] The *as* was reduced in weight in the 1st Punic War or soon after.
[f] A piece worth two *asses*.

pearls hang invisible suspended by gold chains from their lady owners' neck, so that even in their sleep they may retain the consciousness of possessing gems: but are even their feet to be shod with gold,[a] and shall gold create this female Order of Knighthood, intermediate between the matron's robe and the common people? Much more becomingly do we men bestow this on our page-boys, and the wealthy show these lads make has quite transformed the public baths! But nowadays even men are beginning to wear on their fingers a representation of Harpocrates[b] and figures of Egyptian deities. In the time of the Emperor Claudius there was also another unusual distinction, belonging to those whose rights of free access to the presence had given them the privilege of wearing a gold likeness of the emperor on a ring, this affording a great opportunity for informations; but all of this was however entirely abolished by the opportune rise to power of the Emperor Vespasian, by making the emperor equally accessible to all. Let this suffice for a discussion of the subject of gold rings and their employment.

A.D. 41–54.

A.D. 69–79.

Roman coinage in three metals.

XIII. Next in degree was the crime committed[c] by the person who first coined a gold denarius,[d] a crime which itself also is hidden and its author unknown. The Roman nation did not even use a stamped silver coinage before the conquest of King Pyrrhus. The *as* weighed one pound—hence the term still in use, 'little pound'[e] and 'two pounder'[f]; this is the reason why a fine is specified in 'heavy bronze,'[g] and why in book-keeping outlay is still designated as 'sums weighed out,' and likewise

275 B.C.

[g] On *aes*, see XXXIV. 1, note.

43 inpendia et dependere, quin et militum stipendia, hoc est stipis pondera, dispensatores, libripendes, qua consuetudine in iis emptionibus, quae mancipi sunt, etiam nunc libra interponitur. Servius rex primus signavit aes. antea rudi usos Romae Timaeus tradit. signatum est nota pecudum, unde et pecunia appellata. maximus census $\overline{\text{CXX}}$ assium fuit illo rege, et ideo haec prima classis.

44 Argentum signatum anno urbis CCCCLXXXV,[1] Q. Ogulnio C. Fabio cos., quinque annis ante primum Punicum bellum. et placuit denarium pro X libris aeris valere, quinarium pro V, sestertium pro dupondio ac semisse. librale autem pondus aeris inminutum est bello Punico primo, cum inpensis res p. non sufficeret, constitutumque ut asses sextantario pondere ferirentur. ita quinque partes lucri factae, dissolu-
45 tumque aes alienum. nota aeris eius fuit ex altera parte Ianus geminus, ex altera rostrum navis, in triente vero et quadrante rates. quadrans antea teruncius vocatus a tribus unciis. postea Hannibale

[1] CCCCLXXXV *Cellarius*: CCCCLXXXXV *B*: DLXXXV *rell.*

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[a] *I.e.* an *as.*

interest as 'weighed on account' and paying as 'weighing down,' and moreover it explains the terms 'soldiers' stipend,' which means 'weights of heaped money,' and the words for accountants and paymasters that mean 'weighers' and 'pound-weighers,' and owing to this custom in purchases that deal with all larger personal property, even at the present day, an actual pair of 'pound'-scales is introduced. King Servius was the first to stamp a design on bronze; previously, according to Timaeus, at Rome they used raw metal. The design stamped on the metal was an ox or a sheep, *pecus*, which is the origin of the term '*pecunia*.' The highest assessment of one man's property in the reign of Servius was 120,000 *as-pieces*, and consequently that amount of property was the standard of the first class of citizens. *Traditional dates 578–534 B.C.*

Silver was first coined in the 485th year of the city, in the consulship of Quintus Ogulnius and Gaius Fabius, five years before the first Punic War. It was decided that the value of a denarius should be ten pounds of bronze, that of a half-denarius five pounds, that of a sesterce two pounds and a half. The weight of a standard pound [a] of bronze was however reduced during the first Punic War, when the state could not meet its expenditure, and it was enacted that the *as* should be struck weighing two ounces. This effected a saving of five sixths, and the national debt was liquidated. The design of this bronze coin was on one side a Janus facing both ways and on the other the ram of a battleship; the third of an *as* and the quarter *as* had a ship. The latter had previously been called a *teruncius*, as weighing three ounces. Subsequently when the presence of Hannibal was being felt, in the dictator- 269–8 B.C. 217 B.C.

urguente[1] Q. Fabio Maximo dictatore asses unciales facti, placuitque denarium XVI assibus permutari, quinarium octonis, sestertium quaternis. ita res p. dimidium lucrata est, in militari tamen stipendio
46 semper denarius pro X assibus datus est. notae argenti fuere bigae atque quadrigae; inde bigati quadrigatique dicti.

Mox lege Papiria semunciarii asses facti. Livius Drusus in tribunatu plebei octavam partem aeris argento miscuit. is, qui nunc victoriatus appellatur, lege Clodia percussus est; antea enim hic nummus ex Illyrico advectus mercis loco habebatur. est autem signatus Victoria, et inde nomen.

47 Aureus nummus post annos LI[2] percussus est quam argenteus ita, ut scripulum valeret sestertios vicenos,[3] quod effectum[4] in librali[5] ratione sestertii,[6] qui tunc erat, CCCC.[7] postea placuit X XXXX signari ex auri libris, paulatimque principes inminuere pondus, et novisissime Nero ad XXXXV.

48 XIV. Sed a nummo prima origo avaritiae faenore excogitato quaestuosaque segnitia; nec paulatim exarsit rabie quadam non iam avaritia, sed fames auri,

[1] urguente *B, cd. Par.* 6801: urguente Marcum *rell.*: urguente Marcum Minucium *Brotier.*

[2] LI *B*: LXII *rell.*

[3] sestertios vicenos *Brotier*: sestertius vicenus *aut* sestertiis vicenis (sestertio *B*: viciens *B*[1]: vincens *B*[2]).

[4] effectum *K. C. Bailey*: efficit *B, cd. Par.* 6801: effecit *rell.*

[5] librali *B*: libras *rell.*: libram *Mayhoff.*

[6] sestertium *Urlichs*: sestertiorum *Caesarius.*

[7] erat *cd. Par.* 6801: erant *rell.*: CCCC *B*: D nongenti *rell.* (sestertios DCCCC *cd. Par.* 6801): *varia editores.*

ship of Quintus Fabius Maximus, *asses* of one ounce weight were coined, and it was enacted that the exchange-value of the denarius should be sixteen *asses*, of the half-denarius eight and of the quarter-denarius four; by this measure the state made a clear gain of one half. But nevertheless in the pay of soldiers one denarius has always been given for ten asses. The designs on silver were a two-horse and a four-horse chariot, and consequently the coins were called a *pair of horses* and a *four-in-hand*.

Next according to a law of Papirius *asses* 89 B.C. weighing half an ounce were struck. Livius Drusus [a] when holding the office of tribune of the plebs alloyed the silver with one-eighth part of bronze. The coin now named the victory coin was struck under the law of Clodius; previously a coin *c.* 104 B.C. of this name was imported from Illyria and was looked on as an article of trade. The design on it was a figure of Victory, which gives it its name.

The first gold coin was struck 51 years later than 217 B.C. the silver coinage, a scruple of gold having the value of twenty sesterces; this was done at 400 to the pound of silver, at the then rating of the sesterce. It was afterwards decided to coin denarii at the rate 49 B.C. of 40 from a pound of gold, and the emperors gradually reduced the weight of the gold denarius, and most recently Nero brought it down to 45 denarii to A.D. 54–68. the pound.

XIV. But from the invention of money came the *Examples of misuse of gold.* original source of avarice when usury was devised, and a profitable life of idleness; by rapid stages what was no longer mere avarice but a positive

[a] Probably the tribune of 123 B.C., not his son who was tribune in 91 B.C.

utpote cum Septumuleius, C. Gracchi familiaris, auro
rependendum caput eius abscisum ad Opimium
tulerit plumboque in os addito parricido suo rem p.
etiam circumscripserit; nec iam Quiritium aliquis,
sed universo nomine Romano infami rex Mithridates
Aquilio duci capto aurum in os infudit. haec parit
49 habendi cupido! pudet intuentem nomina ista, quae
subinde nova Graeco sermone excogitantur insperso
argenteis vasis auro et incluso, quibus deliciis pluris
veneunt inaurata quam aurea, cum sciamus inter-
dixisse castris suis Spartacum, ne quis aurum haberet
aut argentum. tanto plus fuit animi fugitivis nos-
50 tris! Messalla orator prodidit Antonium triumvirum
aureis usum vasis in omnibus obscenis desideriis,
pudendo crimine etiam Cleopatrae. summa apud
exteros licentiae fuerat Philippum regem poculo
aureo pulvinis subdito dormire solitum, Hagnonem
Teium, Alexandri Magni praefectum, aureis clavis
suffigere crepidas: Antonius solus contumelia natu-
rae vilitatem auro fecit. o dignum proscriptione,
sed Spartaci!

51 XV. Equidem miror populum Romanum victis
gentibus in tributo semper argentum imperasse, non

[a] Consul in 121 B.C.

[b] After the battle of Protomachium in Asia Minor, 88 B.C.

[c] Leader of a great slave-rising in Italy, 73–71 B.C.

[d] *I.e.* by a slave, not by a fellow freeman. Antony was infamous for the proscription which he inflicted in 43 B.C.

hunger for gold flared up with a sort of frenzy, inasmuch as the friend of Gaius Gracchus, Septumuleius, a price having been set on Gracchus's 121 B.C. head to the amount of its weight in gold, when Gracchus's head had been cut off, brought it to Opimius,[a] after adding to his unnatural murder by putting lead in the mouth of the corpse, and so cheated the state in addition. Nor was it now some Roman citizen, but King Mithridates who disgraced the whole name of Roman when he poured molten gold into the mouth of the General Aquilius whom he had taken prisoner.[b] These are the things that the lust for possessions engenders! One is ashamed to see the new-fangled names that are invented every now and then from the Greek to denote silver vessels filigreed or inlaid with gold, niceties which make gilded plate fetch a higher price than gold plate, when we know that Spartacus[c] issued an order to his camp forbidding anybody to possess gold or silver: so much more spirit was there then in our run-away slaves! The orator Messala has told us that the triumvir Antony used vessels of *c.* 83–30 B.C. gold in satisfying all the indecent necessities, an enormity that even Cleopatra would have been 69-8–30 B.C. ashamed of. Till then the record in extravagance had lain with foreigners—King Philip sleeping with *Ruled* 359–336 B.C. a gold goblet under his pillows and Alexander the *Ruled* 336–323 B.C. Great's prefect Hagnon of Teos having his sandals soled with gold nails; but Antony alone cheapened gold by this contumely of nature. How he deserved to be proscribed! but proscribed by Spartacus![d]

Examples of luxury and wealth in precious metals.

XV. It does indeed surprise me that the Roman nation always imposed a tribute of silver, not of gold, on races that it conquered, for instance on Carthage

aurum, sicut Carthagini cum Hannibale victae octingenta milia, $\overline{\text{XVI}}$ [1] pondo annua in quinquaginta annos, nihil auri. nec potest videri paenuria mundi id evenisse. iam Midas et Croesus infinitum possederant, iam Cyrus devicta Asia pondo $\overline{\text{XXIIII}}$ invenerat praeter vasa aurumque factum et in eo solium,[2] platanum, vitem. qua victoria argenti $\overline{\text{D}}$ [3] talentorum reportavit et craterem Semiramidis,
52 cuius pondus XV talentorum colligebat. talentum Aegyptium pondo LXXX patere M.[4] Varro tradit. iam regnaverat in Colchis Saulaces Aeetae suboles, qui terram virginem nactus plurimum auri argentique eruisse dicitur in Suanorum gente, et alioqui velleribus aureis incluto regno. et illius aureae camarae, argenteae trabes et columnae atque parastaticae narrantur victo [5] Sesostri, Aegypti rege tam superbo, ut prodatur annis quibusque sorte reges singulos e subiectis iungere ad currum solitus atque ita triumphare.

53 XVI. Et nos fecimus quae posteri fabulosa arbitrentur. Caesar, qui postea dictator fuit, primus in aedilitate munere patris funebri omni apparatu

[1] $\overline{\text{XVI}}$ *Ian*: AVT *cdd.* (*om. B*: argenti *cd. Par.* 6801).
[2] soliū (*i.e.* solium) *Mayhoff*: solia ac *Pintianus*: foliatam *Ian*: folia *B*: folia ac *rell.*
[3] D *coni. Warmington.*
[4] patere M. *Detlefsen*: capere *Gelen*: pendere *aut* habere *coni. Mayhoff*: patere *cdd.* (paterem *cd. Leid. Voss.*).
[5] victae *cd. Par.* 6801.

[a] Probably the right reading is D = 500.
[b] The legend was that Phrixus flew there on a ram with a fleece of gold to escape from his stepmother, and married the

when conquered together with Hannibal, 800,000 pounds weight of silver in yearly instalments of 16,000 pounds spread over 50 years, but no gold. Nor can it be considered that this was due to the world's poverty. Midas and Croesus had already possessed wealth without limit, and Cyrus had already on conquering Asia Minor found booty consisting of 24,000 pounds weight of gold, besides vessels and articles made of gold, including a throne, a plane-tree and a vine. And by this victory he carried off 500,000[a] talents of silver and the wine-bowl of Semiramis the weight of which came to 15 talents. The Aegyptian talent according to Marcus Varro amounts to 80 pounds of gold. Saulaces the descendant of Aeetes had already reigned in Colchis, who is said to have come on a tract of virgin soil in the country of the Suani and elsewhere and to have dug up from it a great quantity of gold and silver, his realm being moreover famous for golden fleeces.[b] We are also told of his gold-vaulted ceilings and silver beams and columns and pilasters, belonging to Sesostris King of Egypt whom Saulaces conquered, so proud a monarch that he is reported to have been in the habit every year of harnessing to his chariot individual kings selected by lot from among his vassals and so going in triumphal procession.

202 B.C.

516–5 B.C.

XVI. We too have done things to be deemed mythical by those who come after us. Caesar, the future dictator, was the first person in the office of aedile to use nothing but silver for the appointments of the arena—it was at the funeral games presented in honour of his father; and this was the first

65 B.C.

daughter of King Aeetes. The fleece was later carried away by Jason and the Argonauts.

harenae argenteo usus est, ferasque etiam argenteis vasis incessivere tum primum noxii, quod iam etiam [1] in municipiis aemulantur. C. Antonius ludos scaena argentea fecit, item L. Murena; Gaius princeps in circo pegma duxit, in quo fuere argenti pondo
54 $\overline{\text{CXXIIII}}$.[2] Claudius successor eius, cum de Brittannia triumpharet, inter coronas aureas $\overline{\text{VII}}$ [3] pondo habere quam contulisset Hispania citerior, $\overline{\text{VIIII}}$ [4] quam Gallia comata, titulis indicavit. huius deinde succesor Nero Pompei theatrum operuit auro in unum diem, quo Tiridati Armeniae regi ostenderet. et quota pars ea fuit aureae domus ambientis urbem!

55 XVII. Auri in aerario populi R. fuere Sex. Iulio L. Aurelio cos., septem annis ante bellum Punicum tertium, pondo $\overline{\text{XVII}}$ [5] CCCCX, argenti $\overline{\text{XXII}}$ LXX, et in numerato $\overline{|\text{LXI}|}$ $\overline{\text{XXXV}}$ CCCC, Sexto Iulio L. Marcio cos., hoc est belli socialis initio, auri . . .[6] $\overline{|\text{XVI}|}$ $\overline{\text{XX}}$ DCCCXXXI.
56 C. Caesar primo introitu urbis civili bello suo ex aerario protulit laterum aureorum $\overline{\text{XV}}$, argenteorum $\overline{\text{XXX}}$, et in numerato [7] $\overline{|\text{CCC}|}$. nec fuit aliis temporibus

[1] iam etiam *B*: etiam *rell.*: iam et *coni. Mayhoff.*
[2] $\overline{\text{CXXIIII}}$ *B*: CXXIIII *aut* CXXXIIII *rell.*
[3] $\overline{\text{VII}}$ *B*: VII *rell.*
[4] $\overline{\text{VIIII}}$ *B*: VIIII *rell.*
[5] *In* §§ 55–56 *numeri varie traduntur.*
[6] *lac. Detlefsen, Mommsen.*
[7] *V.ll.* nummo, numero (*add.* HS *cdd. nonnulli*: pondo *cd. Par.* 6801).

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[a] A wooden edifice on wheels in two or more stages, which were raised and lowered, opened and closed, by machinery; on them performances were given.

[b] So *cd. B.* The number 124 or 134 of the other *cdd.* is of course much too small.

[c] So *cd. B.* The other MSS. give 7 and 9. The higher number is so absurd that perhaps we should omit *inter* and

occasion on which criminals made to fight with wild animals had all their equipment made of silver, a practice nowadays rivalled even in our municipal towns. Gaius Antonius gave plays on a silver stage, and so did Lucius Murena; and the emperor Gaius Caligula brought on a scaffolding [a] in the A.D. 37-41. circus which had on it 124,000 [b] pounds weight of silver. His successor Claudius when celebrating a triumph after the conquest of Britain, advertised by placards A.D. 43. that among the gold coronets there was one having a weight of 7000 [c] pounds contributed by Hither Spain and one of 9000 [c] from Gallia Comata. His immediate successor Nero covered the theatre of A.D. 54-68. Pompey with gold for one day's purpose, when he was to display it to Tiridates King of Armenia. Yet how small was the theatre in comparison with Nero's Golden Palace which goes all round the city!

XVII. The gold contained in the national treasury of Rome in the consulship of Sextus Julius 156 B.C. and Lucius Aurelius, seven years before the third Punic War, amounted to 17,410 lbs., the silver to 22,070 lbs., and in specie there was 6,135,400 sesterces; in the consulship of Sextus Julius and 91 B.C. Lucius Marcius, that is to say, at the beginning of the war with the allies,[d] there was . . . lbs. of gold and 1,620,831 lbs. of silver. Gaius Julius Caesar, on first entering Rome during the civil war that bears 49 B.C. his name, drew from the treasury 15,000 gold ingots, 30,000 silver ingots, and 30,000,000 sesterces in coin; at no other periods was the state more wealthy.

translate: 'that there were crowns weighing in all 7000 pounds contributed by Hither Spain and 9000 pounds from Gallia Comata.'

[d] See n. on § 20.

res p. locupletior. intulit et Aemilius Paulus Perseo rege victo e Macedonica praeda ⌈MMM⌉, a quo tempore populus Romanus tributum pendere desiit.

57 XVIII. Laquearia, quae nunc et in privatis domibus auro teguntur, post Carthaginem eversam primo in Capitolio inaurata sunt censura L. Mummi. inde transiere in camaras quoque et parietes, qui iam et ipsi tamquam vasa inaurantur, cum varie sua aetas de Catulo existimaverit, quod tegulas aereas Capitoli inaurasset.

58 XIX. Primos inventores auri, sicut metallorum fere omnium, septimo volumine diximus. praecipuam gratiam huic materiae fuisse arbitror non colore, qui clarior in argento est magisque diei similis, ideo militaribus signis familiarior, quoniam [1] longius fulget, manifesto errore eorum, qui colorem siderum placuisse in auro arbitrantur, cum in gemma aliisque
59 rebus non sit praecipuus. nec pondere aut facilitate materiae praelatum est ceteris metallis, cum cedat per utrumque plumbo,[2] sed quia rerum uni nihil igne deperit, tuto [3] etiam in incendiis rogisque. quin immo quo saepius arsit, proficit ad bonitatem,

[1] *V.l.* quo nimis: quoniam in iis *coni. Mayhoff.*
[2] plumbo *cdd.*: plumbum *coni. K. C. Bailey.*
[3] *V.ll.* tota, toto.

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[a] King of Macedonia, defeated at Pydna, 168 B.C.
[b] It was not levied after 167 B.C.
[c] *I.e.* he was by no means universally approved.
[d] This is not true.

Aemilius Paulus also after the defeat of King Perseus [a] paid in to the treasury from the booty won in Macedonia 300 million sesterces; and from that date onward the Roman nation left off paying the citizens' property-tax.[b]

XVIII. At the present day we see ceilings covered with gold even in private houses, but they were first gilded in the Capitol during the censorship of Lucius Mummius after the fall of Carthage. 146 B.C. From ceilings the use of gilding passed over also to vaulted roofs and walls, these too being now gilded like pieces of plate, whereas a variety of judgements were passed [c] on Catulus by his contemporaries for *Between* 79 *and* 60 B.C. having gilded the brass tilings of the Capitol.

XIX. We have already said in Book VII who VII. 97. were the people who first discovered gold, and *Popularity of gold.* almost all of the metals likewise. I think that the chief popularity of this substance has been won not by its colour, that of silver being brighter and more like daylight, which is the reason why it is in more common use for military ensigns because its brilliance is visible at a greater distance; those persons who think that it is the colour of starlight in gold that has won it favour being clearly mistaken because in the case of gems and other things with the same tint it does not hold an outstanding place. Nor is it its weight or its malleability that has led to its being preferred to all the rest of the metals, since in both qualities it yields [d] the first place to lead, but because gold is the only thing that loses no substance by the *Special qualities of gold.* action of fire, but even in conflagrations and on funeral pyres receives no damage. Indeed as a matter of fact it improves in quality the more often it is fired, and fire serves as a test of its goodness.

aurique experimentum ignis est, ut simili colore rubeat ignescatque et ipsum; obrussam vocant.
60 primum autem bonitatis argumentum quam difficillime accendi. praeterea mirum, prunae [1] violentissimi ligni indomitum palea citissime ardescere atque, ut purgetur, cum plumbo coqui.

Altera causa pretii maior, quod minimum usus deterit, cum argento, aere, plumbo lineae praedu-
61 cantur manusque sordescant decidua materia. nec aliud laxius dilatatur aut numerosius dividitur, utpote cuius unciae in septingenas quinquagenas pluresque bratteas quaternum utroque digitorum spargantur. crassissimae ex iis Praenestinae vocantur, etiamnum retinentes [2] nomen Fortunae inaurato fidelissime ibi
62 simulacro. proxima brattea quaestoria appellatur. Hispania strigiles [3] vocat auri parvolas massas. super omnia solum in massa aut ramento capitur. cum cetera in metallis reperta igni perficiantur, hoc statim aurum est consummatamque materiam suam protinus habet, cum ita invenitur. haec enim inventio eius naturalis est; alia, quam dicemus, coacta. super cetera non robigo ulla, non aerugo, non aliud ex ipso, quod consumat bonitatem minuatve pondus. iam contra salis et aceti sucos, domitores rerum, constantia [4] superat omnia, superque [5] netur ac

[1] pruna *cd. deperd. recte*?
[2] retinente *B.*
[3] *V.ll.* strigile, striges (*B*).
[4] constantiam *B.*
[5] superat omnia superque *Mayhoff*: superque superat omnia *B*: superque omnia *rell.*

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[a] Cf. Schol. ad Thuc. II. 13 ὄβρυζον χρυσίον.
[b] A variant reading 'striges' gives 'grooves.'

making it assume a similar red hue and itself becomes the colour of fire; this process is called assaying.[a] The first proof of quality in gold is however its being affected by fire with extreme difficulty; beside that, it is remarkable that though invincible to live coal made of the hardest wood it is very quickly made red hot by a fire of chaff, and that for the purpose of purifying it it is roasted with lead.

Another more important reason for its value is that it gets extremely little worn by use; whereas, with silver, copper and lead, lines may be drawn, and stuff that comes off them dirties the hand. Nor is any other material more malleable or able to be divided into more portions, seeing that an ounce of gold can be beaten out into 750 or more leaves 4 inches square. The thickest kind of gold leaf is called Palestrina leaf, still bearing the name taken from the most genuinely gilded statue of Fortune in that place. The foil next in thickness is styled Quaestorian leaf. In Spain tiny pieces of gold are called scrapers.[b] Gold more than all other metals is found unalloyed in nuggets or in the form of detritus. Whereas all other metals when found in the mines are brought into a finished condition by means of fire, gold is gold straight away and has its substance in a perfect state at once, when it is obtained by mining. This is the natural way of getting it, while another which we shall describe is artificial. More §§ 68 *sqq.*
than any other substance gold is immune from rust or verdigris or anything else emanating from it that wastes its goodness or reduces its weight. Moreover in steady resistance to the overpowering effect of the juices of salt and vinegar it surpasses all things, and over and above that it can be spun

63 texitur lanae modo vel sine lana. tunica aurea triumphasse Tarquinium Priscum Verrius docet; nos vidimus Agrippinam Claudi principis, edente eo navalis proelii spectaculum, adsidentem et indutam paludamento aureo textili sine alia materia. Attalicis vero iam pridem intexitur, invento regum Asiae.

64 XX. Marmori et iis, quae candefieri non possunt, ovi candido inlinitur, ligno glutini ratione conposita,[1] leucophorum vocant. quid sit hoc aut quemadmodum fiat, suo loco docebimus. aes inaurari argento vivo aut certe hydrargyro legitimum erat, de quis, ut[2] dicemus illorum naturam reddentes, excogitata fraus
65 est. namque aes cruciatur in primis[3] accensumque restinguitur sale, aceto, alumine, postea examinatur,[4] an satis recoctum sit, splendore deprehendente. iterumque exhalatur[5] igni, ut possit, edomitum mixtis pumice et[6] alumine, argento vivo inductas accipere bratteas. alumen et in purgando vim habet qualem esse diximus plumbo.

66 XXI. Aurum invenitur in nostro orbe, ut omittamus Indicum a formicis aut apud Scythas grypis

[1] composito *vel* re composita *coni. Mayhoff.*
[2] ut *cd. Par.* 6801: *om. rell.*
[3] primis *cdd.*: prunis *coni. D'Arcy Thompson.*
[4] examinatur *K. C. Bailey*: exharenatur.
[5] exhalatur *cdd.*: exharenatur *Detlefsen*: excitatur *coni. Mayhoff.*
[6] et *add. K. C. Bailey.*

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[a] Probably Attalus I of Pergamum, 241–197 B.C.
[b] Literally 'fluid silver.'
[c] See XXXV. 183 ff.
[d] *I.e.* alum purifies copper as lead purifies gold.

into thread and woven into a fabric like wool, even without an addition of wool. Verrius informs us that Tarquinius Priscus celebrated a triumph wearing a golden tunic. We have in our own times seen the Emperor Claudius's wife Agrippina, at a show at which he was exhibiting a naval battle, seated at his side wearing a military cloak made entirely of cloth of gold. For a long period gold has been woven into the fabric called cloth of Attalus,[a] an invention of Kings of Asia. *Traditional dates 616-578 B.C.*

XX. On marble and other materials incapable of being raised to a white heat gold is laid with white of egg; on wood it is laid with glue according to a formula; it is called leucophorum, white-bearing; what this is and how it is made we will explain in its proper place. The regular way to gild copper XXXV. 36.
would be to use natural or at all events artificial quicksilver,[b] concerning which a method of adulteration has been devised, as we shall relate in describing §§ 100. 125.
the nature of those substances. The copper is first subjected to the violence of fire; then, when it is red hot, it is quenched with a mixture of brine, vinegar, and alum,[c] and afterwards put to a test, its brilliance of colour showing whether it has been sufficiently heated; then it is again dried in the fire, so that, after a thorough polishing with a mixture of pumice and alum, it is able to take the gold-leaf laid on with quicksilver. Alum has the same clean- § 60.
sing property here that we said is found in lead.[d]

XXI. Gold in our part of the world—not to speak of the Indian gold obtained from ants or the gold dug up by griffins in Scythia [e]—is obtained in three *Methods for discovering gold.*

[e] This Indian and Scythian gold was perhaps got from Tibet. The stories about it go back to Herodotus.

erutum, tribus[1] modis: fluminum ramentis, ut in Tago Hispaniae, Pado Italiae, Hebro Thraciae, Pactolo Asiae, Gange Indiae, nec ullum absolutius aurum est, ut cursu ipso attrituque perpolitum. alio modo puteorum scrobibus effoditur aut in ruina montium quaeritur[2]; utraque ratio dicatur.

67 Aurum qui quaerunt, ante omnia segullum[3] tollunt; ita vocatur indicium. alveus hic est harenae, quae lavatur, atque ex eo, quod resedit, coniectura capitur. invenitur aliquando in summa tellure protinus rara felicitate, ut nuper in Delmatia principatu Neronis singulis diebus etiam quinquagenas libras fundens. cum ita inventum est in summo caespite, talutium[4] vocant, si et aurosa tellus subest. cetero montes Hispaniarum, aridi sterilesque et in quibus nihil aliud gignatur, huic[5] bono fertiles esse coguntur.

68 Quod puteis foditur, canalicium vocant, alii canaliense, marmoris glareae inhaerens, non illo modo, quo in oriente[6] sappiro atque Thebaico aliisque in gemmis scintillat, sed micans[7] amplexu[8] marmoris. vagantur hi venarum canales per latera puteorum et huc illuc, inde nomine invento, tellusque ligneis
69 columnis suspenditur. quod effossum est, tunditur,

[1] tribus *Bergk*: apud nos tribus.
[2] quaeritur *B*: quare *rell.*
[3] *V.l.* segutilum.
[4] talutium *B*: talutatium *rell.*: alutatium *Hardouin*: alutiatum *Gronov*: *an* alutium (*cf.* XXXIV, 157)?
[5] hoc *coni. Warmington.*
[6] orientis *coni. Mayhoff.*
[7] micans B^2: micas.
[8] amplexu *Salmasius*: amplexum.

ways: in the detritus of rivers, for instance in the Tagus in Spain, the Po in Italy, the Maritza in Thrace, the Sarabat in Asia Minor and the Ganges in India; and there is no gold that is in a more perfect state, as it is thoroughly polished by the mere friction of the current. Another method is by sinking shafts; or it is sought for in the fallen debris of mountains. Each of these methods must be described.

People seeking for gold begin by getting up *segullum*[a]—that is the name for earth that indicates the presence of gold. This is a pocket of sand, which is washed, and from the sediment left an estimate of the vein is made. Sometimes by a rare piece of luck a pocket is found immediately, on the surface of the earth, as occurred recently in Dalmatia when Nero was emperor, one yielding fifty pounds weight of gold a day. Gold found in this way in the surface crust is called *talutium* if there is also auriferous earth underneath. The otherwise dry, barren mountains of the Spanish provinces which produce nothing else whatever are forced into fertility in regard to this commodity.

A.D. 54–68.

Gold-mining.

Gold dug up from shafts is called 'channelled' or 'trenched' gold; it is found sticking to the grit of marble, not in the way in which it gleams in the lapis lazuli of the East and the stone[b] of Thebes[c] and in other precious stones, but sparkling in the folds of the marble. These channels of veins wander to and fro along the sides of the shafts, which gives the gold its name; and the earth is held up by wooden props. The substance dug out is crushed, washed,

[a] *Segullo* is still the miners' name for surface earth in auriferous deposits in Castile.

[b] Apparently some micaceous granite. [c] In Egypt.

lavatur, uritur, molitur in farinam; farinam[1] a pila scudem[2] vocant; argentum, quod exit a fornace, sudorem. quae e camino iactatur spurcitia in omni metallo scoria appellatur. haec in auro tunditur iterumque coquitur. catini fiunt ex tasconio; hoc est terra alba similis argillae, neque enim alia flatum ignemque et ardentem materiam tolerat.

70 Tertia ratio opera vicerit Gigantum. cuniculis per magna spatia actis cavantur montes lucernarum ad lumina; eadem mensura vigiliarum est, multisque mensibus non cernitur dies.

Arrugias id genus vocant. siduntque rimae subito et opprimunt operatos,[3] ut iam minus temerarium videatur e profundo maris petere margaritas atque purpuras. tanto nocentiores fecimus terras! relinquuntur itaque fornices crebri montibus sustinendis.

71 occursant in utroque genere silices; hos igne et aceto rumpunt, saepius vero, quoniam id cuniculos[4] vapore et fumo strangulat, caedunt fractariis CL libras ferri habentibus egeruntque umeris noctibus ac diebus per tenebras proximis tradentes; lucem novissimi cernunt. si longior videtur silex, latus

[1] molitur (*aut* mollitur) in farinam; farinam *Warmington*: mollitur (*B, cd. Par.* 6801: molitur *rell.*) farinam (in farinam *cd. Flor. Ricc. et ut videtur cd. Par.* 6801).

[2] a pila scudem *Madvig*: a.p. cudem *Detlefsen*: apitascudem *B*: *varia rell. cdd. et edd.*

[3] *V.ll.* operantes, operarios.

[4] id cuniculos *B*: in cuniculis *rell.*

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[a] A given amount of oil is known to last a specified time.

[b] *Arrugia* is said to be the term for a deep mine in Spain to-day. The word is probably connected ὀρύσσω, dig.

fired and ground to a soft powder. The powder from the mortar is called the '*scudes*' and the silver that comes out from the furnace the 'sweat'; the dirt thrown out of the smelting-furnace in the case of every metal is called '*scoria*,' slag. In the case of gold the scoria is pounded and fired a second time; the crucibles for this are made of tasconium, which is a white earth resembling clay. No other earth can stand the blast of air, the fire, or the intensely hot material.

The third method will have outdone the achievements of the Giants. By means of galleries driven for long distances the mountains are mined by the light of lamps—the spells of work are also measured by lamps,[a] and the miners do not see daylight for many months.

The name for this class of mines is *arrugiae*;[b] also cracks give way suddenly and crush the men who have been at work, so that it actually seems less venturesome to try to get pearls and purple-fishes out of the depth of the sea: so much more dangerous have we made the earth! Consequently arches are left at frequent intervals to support the weight of the mountain above. In both kinds of mining masses of flint are encountered, which are burst asunder by means of fire and vinegar, though more often, as this method makes the tunnels suffocating through heat and smoke, they are broken to pieces with crushing-machines carrying 150 lbs. of iron, and the men carry the stuff out on their shoulders, working night and day, each man passing them on to the next man in the dark, while only those at the end of the line see daylight. If the bed of flint seems too long, the miner follows along the side of it

sequitur fossor ambitque. et tamen in silice facilior
72 existimatur opera; est namque terra ex quodam argillae genere glarea mixta—gangadiam vocant—prope inexpugnabilis. cuneis eam ferreis adgrediuntur et isdem malleis nihilque durius putant, nisi quod inter omnia auri fames durissima est. peracto opere cervices fornicum ab ultimo caedunt.[1] dat signum rima, eamque[2] solus intellegit in cacumine
73 eius montis vigil. hic voce, nutu[3] evocari iubet operas pariterque ipse devolat. mons fractus cadit ab sese longe fragore qui concipi humana mente non possit, aeque et flatu incredibili. spectant victores ruinam naturae. nec tamen adhuc aurum est nec sciere esse, cum foderent, tantaque ad pericula et inpendia satis causae fuit sperare quod cuperent.

74 Alius par labor ac vel maioris inpendii: flumina ad lavandam hanc ruinam iugis[4] montium obiter duxere a centesimo plerumque lapide; corrugos vocant, a conrivatione credo. mille et hic labores: praeceps

[1] cadunt *B*.

[2] rima eamque *cd. Par.* 6801: ruina eamque *B et al.*: ruinamque *rell.*: ruinae eamque *Gelen*: ruinae rima eamque *Detlefsen*.

[3] voce nutu *B*: voce ictuve *cd. Tolet.*: vocent utve *rell.*: voce in tutum *Detlefsen*.

[4] *fortasse* ⟨a⟩ *vel* ⟨ab⟩ iugis.

and goes round it. And yet flint is considered to involve comparatively easy work, as there is a kind of earth consisting of a sort of potter's clay mixed with gravel, called *gangadia*, which it is almost impossible to overcome. They attack it with iron wedges and the hammer-machines mentioned above; and it is thought to be the hardest thing that exists, except greed for gold, which is the most stubborn of all things. When the work is completely finished, beginning with the last, they cut through, at the tops, the supports of the arched roofs. A crack gives warning of a crash, and the only person who notices it is the sentinel on a pinnacle of the mountain. He by shout and gesture gives the order for the workmen to be called out and himself at the same moment flies down from his pinnacle. The fractured mountain falls asunder in a wide gap, with a crash which it is impossible for human imagination to conceive, and likewise with an incredibly violent blast of air. The miners gaze as conquerors upon the collapse of Nature. And nevertheless even now there is no gold so far, nor did they positively know there was any when they began to dig; the mere hope of obtaining their coveted object was a sufficient inducement for encountering such great dangers and expenses.

Another equally laborious task involving even greater expense is the incidental operation of previously bringing streams along mountain-heights frequently a distance of 100 miles for the purpose of washing away the débris of this collapse; the channels made for this purpose are called *corrugi*, a term derived I believe from *conrivatio*, a uniting of streams of water. This also involves a thousand

esse libramentum oportet, ut ruat verius quam fluat; itaque altissimis partibus ducitur. convalles et intervalla substructis canalibus iunguntur. alibi rupes inviae caeduntur sedemque trabibus cavatis praebere
75 coguntur. qui caedit, funibus pendet, ut procul intuenti species ne ferarum quidem, sed alitum fiat. pendentes maiore ex parte librant et lineas itineri praeducunt, quaque insistentis vestigiis hominis locus non est, amnes trahuntur ab homine.[1] vitium lavandi est, si fluens amnis lutum inportet; id genus terrae urium vocant. ergo per silices calculosve ducunt et urium evitant. ad capita deiectus in superciliis montium piscinae cavantur ducenos pedes in quasque partes et in altitudinem denos. emissaria in iis quina pedum quadratorum ternum fere relinquuntur, ut repleto stagno excussis opturamentis
76 erumpat torrens tanta vi ut saxa provolvat. alius etiamnum in plano labor. fossae, per quas profluat, cavantur—agogas vocant—; hae sternuntur gradatim ulice. frutex est roris marini similis, asper aurumque retinens. latera cluduntur tabulis, ac per

[1] trahuntur ab homine *B*: trahuntur ad homines *rell.*: trahunt. omne *Hardouin.*

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[a] *I.e.* the gold-bearing débris.
[b] The identification is doubtful in view of the alleged resemblance to rosemary. Rosemary may be called 'rough,' but it is not prickly like gorse.

tasks; the dip of the fall must be steep, to cause a rush rather than a flow of water, and consequently it is brought from very high altitudes. Gorges and crevasses are bridged by aqueducts carried on masonry; at other places impassable rocks are hewn away and compelled to provide a position for hollowed troughs of timber. The workman hewing the rock hangs suspended with ropes, so that spectators viewing the operations from a distance seem to see not so much a swarm of strange animals as a flight of birds. In the majority of cases they hang suspended in this way while taking the levels and marking out the lines for the route, and rivers are led by man's agency to run where there is no place for a man to plant his footsteps. It spoils the operation of washing if the current of the stream carries mud along with it: an earthy sediment of this kind is called *urium*. Consequently they guide the flow over flint stones and pebbles, and avoid *urium*. At the head of the waterfall on the brow of the mountains reservoirs are excavated measuring 200 ft. each way and 10 ft. deep. In these there are left five sluices with apertures measuring about a yard each way, in order that when the reservoir is full the stopping-barriers may be struck away and the torrent may burst out with such violence as to sweep forward the broken rock.[a] There is also yet another task to perform on the level ground. Trenches are excavated for the water to flow through —the Greek name for them means 'leads'; and these, which descend by steps, are floored with gorse [b]—this is a plant resembling rosemary, which is rough and holds back the gold. The sides are closed in with planks, and the channels are carried

praerupta suspenduntur canales. ita profluens terra in mare labitur ruptusque mons diluitur, ac longe terras in mare his de causis iam promovit Hispania.
77 in priore genere quae exhauriuntur inmenso labore, ne occupent puteos, in hoc rigantur. aurum arrugia quaesitum non coquitur, sed statim suum [1] est. inveniuntur ita massae, nec non in puteis, et denas excedentes libras; palagas,[2] alii palacurnas,[3] iidem quod minutum est balucem vocant. ulex siccatur, uritur, et cinis eius lavatur substrato caespite her-
78 boso, ut sidat aurum. vicena milia pondo ad hunc modum annis singulis Asturiam atque Callaeciam et Lusitaniam praestare quidam prodiderunt, ita ut plurimum Asturia gignat. neque in alia terrarum parte tot saeculis perseverat haec fertilitas. Italiae parci vetere interdicto patrum diximus; alioqui nulla fecundior metallorum quoque erat tellus. extat lex censoria Victumularum [4] aurifodinae in Vercellensi agro, qua cavebatur, ne plus quinque milia hominum in opere publicani haberent.
79 XXII. Aurum faciendi est etiamnum una ratio ex auripigmento, quod in Syria foditur pictoribus in summa tellure, auri colore, sed fragile lapidum specularium modo. invitaveratque spes Gaium prin-

[1] sudum *coni. Hermolaus Barbarus.*
[2] palagas *B*: palacas *rell.*: palacras *ed. Basil.*
[3] *V.ll.* psalacurnas, palacranas.
[4] Victumularum *B*: *V.ll.* victim-, vittim-: (vici) Ictimulorum *Hermolaus Barbarus coll. Strab.*

[a] See § 70. [b] Yellow sulphide of arsenic.

on arches over steep pitches. Thus the earth carried along in the stream slides down into the sea and the shattered mountain is washed away; and by this time the land of Spain owing to these causes has encroached a long way into the sea. The material drawn out at such enormous labour in the former kind of mining so as not to fill up the shafts is in § 67.
this latter process washed out. The gold obtained by means of an *arrugia* [a] does not have to be melted, but is pure gold straight away. In this process nuggets are found and also in the shafts, even weighing more than ten pounds. They are called palagae or else palacurnae, and also the gold in very small grains baluce. The gorse is dried and burnt and its ash is washed on a bed of grassy turf so that the gold is deposited on it. According to some accounts Asturia and Callaecia and Lusitania produce in this way 20,000 lbs. weight of gold a year, Asturia supplying the largest amount. Nor has there been in any other part of the world such a continuous production of gold for so many centuries. We have stated that by an old prohibiting decree of the senate Italy is protected from exploitation; otherwise no country would have been more productive in metals, as well as in crops. There is extant a ruling of the censors relating to the gold mines of Victumulae in the territory of Vercellae which prohibited the farmers of public revenues from having more than 5000 men engaged in the work.

XXII. There is moreover one method of making gold out of orpiment [b] which is dug up in Syria for use by painters; it is found on the surface of the earth, and is of a gold colour, but is easily broken, like looking-glass stone. Hopes inspired by it had

cipem avidissimum auri; quam ob rem iussit excoqui magnum pondus et plane fecit aurum excellens, sed ita parvi ponderis, ut detrimentum sentiret propter avaritiam expertus, quamquam auripigmenti librae X IIII permutarentur. nec postea temptatum ab ullo est.

80 XXIII. Omni auro inest argentum vario pondere, aliubi decuma parte,[1] aliubi octava. in uno tantum Callaeciae metallo, quod vocant Albucrarense, tricensima sexta portio invenitur; ideo ceteris praestat. ubicumque quinta argenti portio est, electrum vocatur; scobes hae reperiuntur in canaliensi. fit et cura electrum argento addito. quod si quintam portio-
81 nem excessit, incudibus non resistit. vestusta et electro auctoritas Homero teste, qui Menelai regiam auro, electro, argento, ebore fulgere tradit. Minervae templum habet Lindos insulae[2] Rhodiorum, in quo Helena sacravit calicem ex electro; adicit historia, mammae suae mensura. electri natura est ad lucernarum lumina clarius argento splendere. quod est nativum, et venena deprehendit. namque discurrunt in calicibus arcus caelestibus similes cum igneo stridore et gemina ratione praedicunt.

[1] decuma parte *B*: non *rell.* (nona *cd. Par. Lat.* 6797: dena alibi nona *cd. Par.* 6801).
[2] insula *B*: in insula *coni. Mayhoff.*

[a] Properly the word means 'amber.' See § 1, note.
[b] *Od.* IV. 71 ff.

attracted the Emperor Gaius Caligula, who was extremely covetous for gold, and who consequently gave orders for a great weight of it to be smelted; and as a matter of fact it did produce excellent gold, but so small a weight of it that he found himself a loser by his experiment that was prompted by avarice, although orpiment sold for 4 denarii a pound; and no one afterwards has repeated the experiment. A.D. 37–41.

XXIII. All gold contains silver in various proportions, a tenth part in some cases, an eighth in others. In one mine only, that of Callaecia called the Albucrara mine, the proportion of silver found is one thirty-sixth, and consequently this one is more valuable than all the others. Wherever the proportion of silver is one-fifth, the ore is called electrum[a]; grains of this are found in 'channelled' gold. An artificial electrum is also made by adding silver to gold. If the proportion of silver exceeds one-fifth, the metal produced offers no resistance on the anvil. Electrum also held a high position in old times, as is evidenced by Homer[b] who represents the palace of Menelaus as resplendent with gold, electrum, silver and ivory. There is a temple of Athena at Lindus of the island of Rhodes in which there is a goblet made of electrum, dedicated by Helen; history further relates that it has the same measurement as her breast. A quality of electrum is that it shines more brightly than silver in lamplight. Natural electrum also has the property of detecting poisons; for semicircles resembling rainbows run over the surface in poisoned goblets and emit a crackling noise like fire, and so advertise the presence of poison in a twofold manner.

'*Electrum.*'

Cf. § 68.

82 XXIV. Aurea statua prima omnium nulla inanitate et antequam ex aere aliqua modo fieret, quam vocant holosphyraton, in templo Anaitidis posita dicitur quo situ terrarum nomen hoc signavimus,
83 numine gentibus illis sacratissimo. direpta ea est Antonii Parthicis rebus, scitumque narratur veteranorum unius Bononiae hospitali divi Augusti cena, cum interrogatus [1] esset, sciretne [2] eum, qui primus violasset id numen, oculis membrisque captum exspirasse; respondit enim cum maxime Augustum e crure [3] eius cenare seque illum esse totumque sibi censum ex ea rapina. hominum primus et auream statuam et solidam LXX [4] circiter olympiade Gorgias Leontinus Delphis in templo posuit sibi. tantus erat docendae artis oratoriae quaestus.

84 XXV. Aurum pluribus modis pollet in remediis volneratisque et infantibus adplicatur, ut minus noceant quae inferantur veneficia. est et ipsi superlato [5] vis malefica, gallinarum quoque et pecuariorum [6] feturis. remedium abluere inlitum [7] et spargere eos, quibus mederi velis. torretur et cum

[1] interrogatus *B*: interrogaretur *rell.*

[2] esset sciretne *B*[2]: esset *B*[1]: essetne (*aut* essene) verum *rell.*: esset verumne esset *Ian.*

[3] cruore *cd. Par.* 6801.

[4] LXXXX *Bergk.*

[5] superlito *Gronov.*

[6] pecuariorum *cd. Flor. Ricc.*: pecorum *rell.*

[7] inlitum *Gronov.*: inlatum.

[a] V. 83, where Anaitica is said to be a region divided from Cappadocia by the upper Euphrates.

[b] 500–497 B.C. But Gorgias the 'sophist' visited Athens in 427 B.C. and professed rhetoric and philosophy there in subsequent years. Probably the right date is the 90th Olympiad (420–417 B.C.).

XXIV. The first gold statue of all that was made of solid metal and even before any was made of bronze, of the kind called 'made of solid beaten metal,' is said to have been erected in the temple of Anaitis, in the region of the earth where we have designated this name,[a] that goddess' deity being held in the highest reverence by those races. This statue was taken as booty during the campaigns of Antonius in Parthia, and a story is told of a witty saying of one of the veterans of our army who was entertaining his late lamented Majesty Augustus as a guest at dinner at Bologna. He was asked whether it was true that the man who was the first to commit this sacrilege against that deity was struck blind and paralysed and so expired. His answer was that the emperor was at that very moment eating his dinner off one of the goddess's legs, and that he himself was the perpetrator of the sacrilege and owed his entire fortune to that piece of plunder. The first solid gold statue of a human being was one of himself set up by Gorgias of Leontini in the temple at Delphi about the 70th Olympiad.[b] So great were the profits to be made by teaching the art of oratory!

Golden statues.

c. 36 B.C.

XXV. Gold is efficacious as a remedy in a variety of ways, and is used as an amulet for wounded people and for infants to render less harmful poisonous charms that may be directed against them. Gold has itself however a maleficent effect if carried over the head, in the case of chickens and the young of cattle as well as human beings. As a remedy it is smeared on, then washed off and sprinkled on the persons you wish to cure. Gold is also heated with twice its weight of salt and

Medicinal uses of gold.

salis gemino pondere, triplici misyis ac rursus cum II salis portionibus et una lapidis, quem schiston vocant. ita virus trahit rebus una crematis in fictili vase,
85 ipsum purum et incorruptum. reliquus cinis servatus in fictili olla, ex qua[1] inlitas[2] lichenas in facie lomento eo convenit ablui. fistulas etiam sanat et quae vocantur haemorroides. quodsi tritus pumex adiciatur, putria ulcera et taetri odoris emendat, ex melle vero decoctum cum melanthio inlitum umbilico leniter solvit alvum. auro verrucas curari M. Varro auctor est.

86 XXVI. Chrysocolla umor est in puteis, quos diximus, per venam auri defluens crassescente limo rigoribus hibernis usque in duritiam pumicis. laudatiorem eandem in aerariis metallis et proximam in aegentariis fieri conpertum est. invenitur et in plumbariis vilior etiam[3] auraria. in omnibus autem his metallis fit et cura multum infra naturalem illam inmissis in venam aquis leniter hieme tota usque in Iunium mensem, dein siccatis Iunio et Iulio, ut plane intellegatur nihil aliud chrysocolla quam vena putris.
87 nativa duritia maxime distat; uvam vocant. et tamen illa quoque herba, quam lutum appellant, tinguitur. natura est, quae lino lanaeve, ad sucum

[1] qua *B*: aqua *rell.* [2] inlitas *B*[2]: inlitus.
[3] *fortasse* tamen.

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[a] *Lomentum* is properly barley-meal mixed with rice.
[b] See § 4, note.
[c] Or: 'Another sort is found in lead mines, but it is inferior to the true "gold"-kind.'

three times its weight of copper pyrites, and again with two portions of salt and one of the stone called 'splittable.' Treated in this way it draws poison out, when the other substances have been burnt up with it in an earthenware crucible while it remains pure and uncorrupted itself. The ash remaining is kept in an earthenware jar, and eruptions on the face may well be cleansed away by being smeared with this lotion [a] from the jar. It also cures fistulas and what are called hæmorrhoids. With the addition of ground pumicestone it relieves putrid and foul-smelling ulcers, while boiled down in honey and git, and applied as a liniment to the navel it acts as a gentle aperient. According to Marcus Varro gold is a cure for warts.

XXVI. Gold-solder [b] is a liquid found in the shafts we spoke of, flowing down along a vein of gold, with a slime that is solidified by the cold of winter even to the hardness of pumicestone. A more highly spoken of variety of the same metal has been ascertained to be formed in copper mines, and the next best in silver-mines. A less valuable sort also with an element of gold is also found in lead mines. [c] In all these mines however an artificial variety is produced that is much inferior to the natural kind referred to; the method is to introduce a gentle flow of water into the vein all winter and go on till the beginning of June and then to dry it off in June and July, clearly showing that gold-solder is nothing else than the putrefaction of a vein of metal. Natural gold-solder, known as 'grape,' differs very greatly from the artificial in hardness, and nevertheless it also takes a dye from the plant called yellow-weed. It is of a substance that absorbs moisture,

Gold-solder. §§ 67 *sqq.*

bibendum. tunditur in pila, dein tenui cribro cernitur, postea molitur ac deinde tenuius cribratur. quidquid non transmeat, repetitur in pila, dein
88 molitur. pulvis semper in catinos digeritur et ex aceto maceratur, ut omnis duritia solvatur, ac rursus tunditur, dein lavatur, in conchis siccatur, tum tinguitur alumine schisto et herba supra dicta pingiturque, antequam pingat. refert quam bibula docilisque sit. nam nisi rapuit colorem, adduntur et scytanum atque turbistum; ita vocant medicamenta sorbere cogentia.

89 XXVII. Cum tinxere pictores, orobitin vocant eiusque duo genera faciunt: elutam,[1] quae servatur in lomentum, et liquidam globulis sudore resolutis. haec utraque genera in Cypro fiunt. laudatissima autem est in Armenia, secunda in Macedonia, largissima in Hispania; summa [2] commendationis, ut colorem in herba segetis laete virentis quam simil-
90 lime reddat. visumque iam est Neronis principis spectaculis harenam circi chrysocolla sterni, cum ipse concolori panno aurigaturus esset. indocta opificum turba tribus eam generibus distinguit: asperam, quae

[1] luteam *Hermolaus Barbarus fortasse recte* (cf. § 91).
[2] *V.l.* summae: summa est *Ian.*

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[a] Cf. XXXV. 186.
[b] These two substances have not been identified.
[c] Perhaps we should adopt the reading *luteam.*

like flax or wool. It is pounded in a mortar and then passed through a fine sieve, and afterwards milled and then sifted again with a finer sieve, everything that does not pass through the sieve being again treated in the mortar and then milled again. The powder is all along separated off into bowls and steeped in vinegar so as to dissolve all hardness, and then is pounded again and then rinsed in shells and left to dry. Then it is dyed by means of 'splittable' alum [a] and the plant above mentioned and so given a colour before it serves as a colour itself. It is important how absorbent it is and ready to take the dye; for if it does not at once catch the colour, scytanum and turbistum [b] must be added as well—those being the names of two drugs producing absorption.

XXVII. When painters have dyed gold-solder, they call it orobitis, vetch-like, and distinguish two kinds, the purified,[c] which is kept for a cosmetic, and the liquid, in which the little balls are made into a paste with a liquid. Both of these kinds are made in Cyprus, but the most highly valued is in Armenia and the second best in Macedonia, while the greatest quantity is produced in Spain, the highest recommendation in the latter being the quality of reproducing as closely as possible the colour in a bright green blade of corn. We have before now seen at the shows given by the emperor Nero the sand of the circus sprinkled with gold- A.D. 54–68.
solder when the emperor in person was going to give an exhibition of chariot-driving wearing a coat of that colour. The unlearned multitude of artisans distinguish three varieties of the substance, the rough, which is valued at 7 denarii a pound, the

taxatur[1] in libras X VII, mediam quae X V, attritam, quam et herbaceam vocant, X III. sublinunt autem harenosam, priusquam inducant, atramento et
91 Paraetonio. haec sunt tenacia eius, colore blanda. Paraetonium, quoniam est natura pinguissimum et propter levorem tenacissimum, atramento aspergitur, ne Paraetonii candor pallorem chrysocollae adferat. luteam putant a luto herba dictam, quam ipsam caeruleo subtritam pro chrysocolla inducunt, vilissimo genere atque fallacissimo.

92 XXVIII. Usus chrysocollae et in medicina est ad purganda volnera cum cera atque oleo. eadem per se arida siccat et[2] contrahit. datur et in angina orthopnoeave lingenda cum melle. concitat vomitiones, miscetur et collyriis ad cicatrices oculorum ac viridibus emplastris ad dolores mitigandos, cicatrices trahendas. hanc chrysocollam medici accsim appellant, quae non est orobitis.

93 XXIX. Chrysocollam et aurifices sibi vindicant adglutinando auro, et inde omnes appellatas similiter virentes dicunt. temperatur autem Cypria aerugine et pueri inpubis urina addito nitro teriturque Cyprio

[1] mataxatur *B*: iam taxatur *coni. Mayhoff.*
[2] siccat et *B*, *cd. Par.* 6801 : et sicca *rell.*

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[a] *Paraetonium*; see XXXV, 30, 36.
[b] ἄκεσις, a remedy, healing.
[c] Or, child (of either sex).

middling, which is 5 denarii, and the crushed, also called the grass-green kind, 3 denarii. Before applying the sandy variety they put on a preliminary coating of black dye and pure white chalk[a]: these serve to hold the gold-solder and give a softness of colour. As the pure chalk is of a very unctuous consistency and extremely tenacious owing to its smoothness, it is sprinkled with a coat of black, to prevent the extreme whiteness of the chalk from imparting a pale hue to the gold-solder. The yellow gold-solder is thought to derive its name from the plant yellow-weed, which is itself often pounded up with steel-blue and applied for painting instead of gold-solder, making a very inferior and counterfeit kind of colour.

XXVIII. Gold-solder is also used in medicine, mixed with wax and olive oil, for cleansing wounds; likewise applied dry by itself it dries wounds and draws them together. It is also given in cases of quinsy or asthma, to be taken as an electuary with honey. It acts as an emetic, and also is used as an ingredient in salves for sores in the eyes and in green plasters for relieving pains, and drawing together scars. This kind of gold-solder is called by medical men 'remedial solder,'[b] and is not the same as orobitis.

XXIX. The goldsmiths also use a special gold-solder of their own for soldering gold, and according to them it is from this that all the other substances with a similar green colour take the name. The mixture is made with Cyprian copper verdigris and the urine of a boy[c] who has not reached puberty with the addition of soda[d]; this is ground with a pestle

[d] Sodium carbonate.

aere in cypriis mortariis; santernam vocant nostri. ita feruminatur aurum, quod argentosum vocant. signum est, si addita santerna nitescit. e diverso aerosum contrahit se hebetaturque et difficulter feruminatur. ad id glutinum fit auro et septima argenti parte ad supra dicta additis unaque tritis.

94 XXX. Contexique par est reliqua circa hoc, ut universa naturae contingat admiratio. auro glutinum est tale, argilla ferro, cadmea aeris massis, alumen lamnis, resina plumbo et marmori, at plumbum nigrum albo iungitur ipsumque album sibi oleo, item stagnum aeramentis, stagno argentum. pineis optume lignis aes ferrumque funditur, sed et Aegyptio papyro, paleis aurum. calx aqua accenditur et Thracius lapis, idem oleo restinguitur, ignis autem aceto maxime et visco et ovo. terra minime flagrat, carboni vis maior exusto iterumque flagranti.

95 XXXI. Ab his argenti metalla dicantur, quae sequens insania est. non nisi in puteis reperitur nullaque spe sui nascitur, nullis, ut in auro, lucentibus

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[a] Here zinc oxide. See also XXXIV. 100.
[b] Tin.
[c] Or *stannum*, an alloy of silver and lead.
[d] Probably lignite.

made of Cyprian copper in mortars of the same metal, and the Latin name for the mixture is santerna. It is in this way used in soldering the gold called silvery-gold; a sign of its having been so treated is if the application of borax gives it brilliance. On the other hand 'coppery' gold shrinks in size and becomes dull, and is difficult to solder; for this purpose a solder is made by adding some gold and one seventh as much silver to the materials above specified, and grinding them up together.

XXX. While speaking of this it will be well to annex the remaining particulars, so as to occasion all-round admiration for Nature. The proper solder for gold is the one described; for iron, potter's clay; for copper in masses, *cadmea* [a]; for copper in sheets, alum; for lead and marble, resin. Black lead however is joined by means of white lead,[b] and white lead to white lead by using oil; stagnum [c] likewise with copper filings, and silver with stagnum. For smelting copper and iron pine-wood makes the best fuel, though Egyptian papyrus can also be used; gold is best smelted with a fire made of chaff. Water puts heat into quicklime and Thracian stone,[d] and olive-oil puts it out; fire however is most readily quenched by vinegar, mistletoe and eggs. Earth it is quite impossible to ignite, but charcoal gives a more powerful heat if it is burned till it goes out and then catches fire again.

XXXI. After these details let us speak about the varieties of silver ore, the next madness of mankind. Silver is only found in deep shafts, and raises no hopes of its existence by any signs, giving off no shining sparkles such as are seen in the case of gold. *Silver.*

scintillis. terra est alias rubra, alias[1] cineracea. excoqui non potest, nisi cum plumbo nigro aut cum vena plumbi—galenam vocant—, quae iuxta argenti venas plerumque reperitur. et eodem opere ignium discedit pars in plumbum, argentum autem innatat[2] superne, ut oleum aquis.

96 Reperitur in omnibus paene provinciis, sed in Hispania pulcherrimum, id quoque in sterili solo atque etiam montibus, et ubicumque una inventa vena est, non procul invenitur alia. hoc quidem et in omni fere materia, unde metalla Graeci videntur dixisse. mirum, adhuc per Hispanias ab Hannibale inchoatos durare puteos. sua nomina ab inventoribus habent,
97 ex quis Baebelo appellatur hodie, qui ccc pondo Hannibali subministravit in dies, ad MD passus iam cavato monte, per quod spatium aquatini[3] stantes noctibus diebusque egerunt aquas lucernarum men-
98 sura amnemque faciunt. argenti vena in summo reperta crudaria appellatur. finis antiquis fodiendi solebat esse alumen inventum; ultra nihil quaerebatur. nuper inventa aeris vena infra alumen nullam finem spei fecit. odor ex argenti fodinis inimicus omnibus animalibus, sed maxime canibus. aurum argentumque quo mollius, eo pulchrius. lineas ex argento nigras praeduci plerique mirantur.

99 XXXII. Est et lapis in iis venis, cuius vomica

[1] *V.l.* rufa alia. [2] natat *B.*
[3] aquatini *coni. Sillig*: Accitani *coni. Hardouin*: Iacetani *Pintianus*: aquitani.

[a] Still so called. It is lead sulphide, the most useful lead ore. For *galena* in a different sense, see XXXIV. 159.
[b] Taking μέταλλα as (ἄλλα) μετ' ἄλλα 'one after another'.
[c] Possibly carbon dioxide, which, since it lies low, would affect dogs before men.

The ore is sometimes red, sometimes ash-coloured. It cannot be smelted except when combined with lead or with the vein of lead, called galena,[a] lead ore, which is usually found running near veins of silver ore. Also when submitted to the same process of firing, part of the ore precipitates as lead while the silver floats on the surface, like oil on water.

Silver is found in almost all the provinces, but the finest is in Spain, where it, as well as gold, occurs in sterile ground and even in the mountains; and wherever one vein is found another is afterwards found not far away. This indeed also occurs in the case of almost every metal, and accounts it seems for the word 'metals' used by the Greeks.[b] It is a remarkable fact that the shafts initiated by Hannibal 221-219 B.C. all over the Spanish provinces are still in existence; they are named from the persons who discovered them; one of these mines, now called after Baebelo, furnished Hannibal with 300 pounds weight of silver a day, the tunnelling having been carried a mile and a half into the mountain. Along the whole of this distance watermen are posted who all night and day in spells measured by lanterns bale out the water and make a stream. The vein of silver nearest the surface is called 'the raw.' In early days the excavations used to stop when they found alum, and no further search was made; but recently the discovery of a vein of copper under the alum has removed all limit to men's hopes. The exhalations [c] from silver mines are dangerous to all animals, but specially to dogs. Gold and silver are more beautiful the softer they are. It surprises most people that silver traces black lines.

XXXII. There is also a mineral found in these *Quicksilver.*

liquoris aeterni argentum vivum appellatur. venenum rerum omnium est perrumpitque vasa permanans tabe dira. omnia ei innatant praeter aurum; id unum ad se trahit. ideo et optime purgat, ceteras eius sordes expuens crebro iactatu fictilibus in vasis. ita vitiis [1] eiectis [2] ut et ipsum ab auro discedat, in pelles subactas effunditur, per quas sudoris vice
100 defluens purum relinquit aurum. ergo et cum aera inaurentur, sublitum bratteis pertinacissime retinet, verum pallore detegit simplices aut praetenues bratteas. quapropter id furtum quaerentes ovi liquore candido usum eum adulteravere, mox et hydrargyrum,[3] de quo dicemus suo loco. et alias argentum vivum non largum inventu est.

101 XXXIII. In isdem argenti metallis invenitur, ut proprie dicatur,[4] spumae lapis candidae nitentisque, non tamen tralucentis; stimi appellant, alii stibi, alii alabastrum, aliqui larbasim.[5] duo eius genera, mas ac femina. magis probant feminam, horridior

[1] *V.ll.* ita vitis, ita ut iis (hiis), avitis: ita autem iis *Sillig*: alutis *Brotier*: vestibus *Hardouin*.

[2] eiectis *Ian*: tectis *B*: *V.ll.* abiectis, iniectis, invectis.

[3] hydrargyrum *L. Poinsinet de Sivry*: hydrargyro.

[4] dicatur *Mayhoff*: dicatus *B*[1]: dictus *B*[2]: dicemus *rell.* (dicamus *cd. Par.* 6801).

[5] larbasim *B*: turbasim *rell.*: larbason *Hermolaus Barbarus coll. Diosc.* V. 99.

veins of silver which contains a humour, in round drops, that is always liquid, and is called quicksilver. It acts as a poison on everything, and breaks vessels by penetrating them with malignant corruption. All substances float on its surface except gold, which is the only thing that it attracts to itself; consequently it is also excellent for refining gold, as if it is briskly shaken in earthen vessels it rejects all the impurities contained in it. When these blemishes have been thus expelled, to separate the quicksilver itself from the gold it is poured out on to hides that have been well dressed, and exudes through them like a kind of perspiration and leaves the gold behind in a pure state. Consequently when also things made of copper are gilded, a coat of quicksilver is applied underneath the gold leaf and keeps it in its place with the greatest tenacity: but if the gold-leaf is put on in one layer or is very thin it reveals the quicksilver by its pale colour. Consequently persons intending this fraud adulterated the quicksilver used for this purpose with white of egg; and later they falsified also hydrargyrum or artificial quicksilver, which we shall speak about in its proper § 123.
place. Otherwise quicksilver is not to be found in any large quantity.

XXXIII. In the same mines as silver there is found *Antimony.*
what is properly to be described as a stone, made of white and shiny but not transparent froth; several names are used for it, stimi, stibi, alabastrum and sometimes larbasis. It is of two kinds, male and female.[a] The female variety is preferred, the male

[a] Probably stibnite (sulphide of antimony), and native metallic antimony respectively (K. C. Bailey, *The Elder Pliny's Chapters on Chemical Subjects,* I, p. 213).

est mas scabriorque et minus ponderosus minusque radians et harenosior, femina contra nitet, friabilis fissurisque, non globis, dehiscens.

102 XXXIV. Vis eius adstringere ac refrigerare, principalis autem circa oculos, namque ideo etiam plerique platyophthalmon id appellavere, quoniam in calliblepharis mulierum dilatet oculos, et fluctiones inhibet oculorum exulcerationesque farina eius ac turis cummi admixto. sistit et sanguinem e cerebro profluentem, efficacissime[1] et contra recentia volnera et contra veteres canum morsus inspersa farina et contra ambusta igni cum adipe ac spuma argenti
103 cerussaque et cera. uritur autem offis bubuli fimi circumlitum in clibanis, dein restinguitur mulierum lacte teriturque in mortariis admixta aqua pluvia; ac subinde turbidum transfunditur in aereum vas emundatum nitro. faex eius intellegitur plumbosissima, quae subsedit in mortario, abiciturque.[2] dein vas, in quod turbida transfusa sint, opertum linteo per noctem relinquitur et postero die quidquid
104 innatet effunditur spongeave tollitur. quod ibi subsedit, flos intellegitur ac linteo interposito in sole siccatur, non ut perarescat, iterumque in mortario teritur et in pastillos dividitur. ante omnia autem

[1] efficacissime *B*: efficaci *rell.* (efficacior *cd. Par.* 6801).
[2] abiciturque *Gelen*: abigiturque *aut* abicitur.

[a] See xxxiv. 175.

being more uneven and rougher to the touch, as well as lighter in weight, not so brilliant, and more gritty; the female on the contrary is bright and friable and splits in thin layers and not in globules.

XXXIV. Antimony has astringent and cooling properties, but it is chiefly used for the eyes, since this is why even a majority of people have given it a Greek name meaning 'wide-eye,' because in beauty-washes for women's eyebrows it has the property of magnifying the eyes. Made into a powder with powdered frankincense and an admixture of gum it checks fluxes and ulcerations of the eyes. It also arrests discharge of blood from the brain, and is also extremely effective with a sprinkling of its powder against new wounds and old dog-bites and against burns if mixed with fat and litharge of silver, or lead acetate[a] and wax. It is prepared by being smeared round with lumps of ox dung and burnt in ovens, and then cooled down with women's milk and mixed with rain water and pounded in mortars. And next the turbid part is poured off into a copper vessel after being purified with soda. The lees are recognized by being full of lead, and they settle to the bottom of the mortars and are thrown away. Then the vessel into which the turbid part was poured off is covered with a cloth and left for a night, and the next day anything floating on the surface is poured off or removed with a sponge. The sediment on the bottom is considered the choicest part and is covered with a linen cloth and put to dry in the sun but not allowed to become very dry, and is ground up a second time in the mortar and divided into small tablets. But it is above all essential to limit the amount of heat

urendi modus necessarius est, ne plumbum fiat. quidam non fimo utuntur coquentes, sed adipe. alii tritum in aqua triplici linteo saccant [1] faecemque abiciunt idque, quod defluxit,[2] transfundunt, quidquid subsidat colligentes. emplastris quoque et collyriis miscent.

105 XXXV. Scoriam in argento Graeci vocant helcysma. vis eius adstringere et refrigerare corpora, ac remedio est [3] addita [4] emplastris ut molybdaena, de qua dicemus in plumbo, cicatricibus maxime glutinandis, et contra tenesmos dysenteriasque infusa clysteribus cum myrteo oleo. addunt et in medicamenta, quae vocant liparas, ad excrescentia ulcerum aut ex attritu facta aut in capite manantia.

106 Fit in isdem metallis et quae vocatur spuma argenti. genera eius tria: optima quam chrysitim vocant, sequens quam argyritim, tertia quam molybditim. et plerumque omnes hi colores in isdem tubulis inveniuntur. probatissima est Attica, proxima Hispaniensis. chrysitis ex vena ipsa fit, argyritis ex argento, molybditis e plumbi ipsius [5] fusura—quae
107 fit Puteolis—et inde habet nomen. omnis autem fit excocta sua materia ex superiore catino defluens in inferiorem et ex eo sublata vericulis ferreis atque in

[1] *V.l.* siccant.
[2] effluxit *B.*
[3] ac remedio est *Mayhoff qui et* acribus *aut* viridibus *aut* a Graecis *coni.*: hac de re *Detlefsen*: quare his *J. Müller*: acre dies B^1: hac re B^2: *om. rell.*
[4] addita *Mayhoff*: additur.
[5] potius *coni. Mayhoff.*

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[a] Really into metallic antimony, mistaken for lead.
[b] *I.e.* débris scraped off.

applied to it, so that it may not be turned into lead.[a] Some people do not employ dung in boiling it but fat. Others pound it in water and strain it through three thicknesses of linen cloth and throw away the dregs, and pour off the liquor that comes through, collecting all the deposit at the bottom, and this they use as an ingredient in plasters and eye-washes.

Slag of silver. XXXV. The slag in silver is called by the Greeks the 'draw-off.'[b] It has an astringent and cooling effect on the body, and like sulphuret of lead, of which we shall speak in dealing with lead, it has healing properties as an ingredient in plasters, being extremely effective in causing wounds to close-up, and when injected by means of syringes, together with myrtle-oil, as a remedy for straining of the bowels and dysentery. It is also used as an ingredient in the remedies called emollient plasters used for proud flesh of gathering sores, or sores caused by chafing or running ulcers on the head.

XXXIV. 173 sqq.

Litharge. The same mines also produce the mineral called scum[c] of silver. Of this there are three kinds, with Greek names meaning respectively golden, silvery and leaden; and for the most part all these colours are found in the same ingots. The Attic kind is the most approved, next the Spanish. The golden scum is obtained from the actual vein, the silvery from silver, and the leaden from smelting the actual lead, which is done at Pozzuoli, from which place it takes its name.[d] Each kind however is made by heating its raw material till it melts, when it flows down from an upper vessel into a lower one and is lifted out of that with small iron spits and then twisted round on

[c] Litharge, lead monoxide.
[d] Argyritis Puteolana.

ipsa flamma convoluta vericulo, ut sit modici ponderis. est autem, ut ex nomine intellegi potest, fervescentis et futurae[1] materiae spuma. distat a scoria quo potest spuma a faece distare: alterum, purgantis se materiae, alterum purgatae vitium est.
108 quidam duo genera faciunt spumae, quae vocant scirerytida[2] et peumenen,[3] tertium molybdaenam in plumbo dicendam. spuma, ut sit utilis, iterum coquitur confractis tubulis ad magnitudinem anulorum.[4] ita accensa follibus ad separandos carbones cineremque abluitur aceto aut vino simulque restinguitur. quodsi sit argyritis, ut candor ei detur, magnitudine fabae confracta in fictili coqui iubetur ex aqua addito in linteolis tritico et hordeo novis, donec
109 ea purgentur. postea VI diebus terunt in mortariis, ter die abluentes aqua frigida et, cum desinant,[5] calida, addito sale fossili in libram spumae obolo. novissimo die dein condunt in plumbeo vase. alii cum faba candida et tisana cocunt siccantque sole, alii in lana candida cum faba, donec lanam non denigret. tunc salem fossilem adiciunt subinde aqua mutata siccantque diebus XL calidissimis aestatis nec non in ventre suillo in aqua coquunt exemptamque

[1] et foturae B^2: e fusura *coni. Mayhoff*: *del. Hardouin.*
[2] scirerytida *B*: *varia rell.*: lythrida *Brotier*: sclererytida *Detlefsen.*
[3] reumenen *Detlefsen.*
[4] avellanarum *Caesarius coll. Diosc.* V. 102: nucularum *coni. Ian.*
[5] desinant *cd. Par.* 6801: desinat *rell.*: dies desinat *Mayhoff*: denigrare desinat *C. F. W. Müller.*

[a] Native lead sulphide.

a spit in the actual flame, in order to make it of moderate weight. Really, as may be inferred from its name, it is the scum of a substance in a state of fusion and in process of production. It differs from dross in the way in which the scum of a liquid may differ from the lees, one being a blemish excreted by the material when purifying itself and the other a blemish in the metal when purified. Some people make two classes of scum of silver which they call 'scirerytis' and 'peumene,' and a third, leaden scum,[a] which we shall speak of under the head of lead. To make the scum available for use it is boiled a second time after the ingots have been broken up into pieces the size of finger-rings. Thus after being heated up with the bellows to separate the cinders and ashes from it it is washed with vinegar or wine, and cooled down in the process. In the case of the silvery kind, in order to give it brilliance the instructions are to break it into pieces the size of a bean and boil it in water in an earthenware pot with the addition of wheat and barley wrapped in new linen cloths, until the cereals are stripped of their husks. Afterwards they grind it in mortars for six days, three times daily washing it with cold water and, when they have ceased operations, with hot, and adding salt from a salt-mine, an obol weight to a pound of scum. Then on the last day they store it in a lead vessel. Some boil it with white beans and pearl-barley and dry it in the sun, and others boil it with beans in a white woollen cloth till it ceases to discolour the wool; and then they add salt from a salt-mine, changing the water from time to time, and put it out to dry on the 40 hottest days of summer. They also boil it in a sow's

XXXIV. 173. *Lead sulphide.*

nitro fricant et ut supra terunt in mortariis cum sale. sunt qui non coquant, sed cum sale terant et adiecta
110 aqua abluant. usus eius ad collyria et cuti[1] mulierum cicatricum foeditates tollendas maculasque, abluendum[2] capillum. vis autem siccare, mollire, refrigerare, temperate purgare, explere ulcera, tumores lenire; talibusque[3] emplastris additur et liparis supra dictis. ignes etiam sacros tollit cum ruta myrtisque et aceto, item perniones cum myrtis et cera.[4]

111 XXXVI. In argentariis metallis invenitur minium quoque, et nunc inter pigmenta magnae auctoritatis et quondam apud Romanos non solum maximae, sed etiam sacrae. enumerat auctores Verrius, quibus credere necesse sit Iovis ipsius simulacri faciem diebus festis minio inlini solitam triumphantiumque corpora;
112 sic Camillum triumphasse; hac religione etiamnum addi in unguenta cenae triumphalis et a censoribus in primis Iovem miniandum locari. cuius rei causam equidem miror, quamquam et hodie id expeti constat Aethiopum populis totosque eo tingui proceres, hunc

[1] cuti *Mayhoff* (*qui et* cutem *coni.*): litum *B*[1]: situm *B*[2]: *varia rell.*
[2] *V.l.* et (*aut* et ad) abluendum: ad alendum *Ian.*
[3] albisque *Fröhner.*
[4] cera *edd. vett.*: cetera.

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[a] Sulphide of mercury ('cinnabar') is meant here. True red lead was properly called *minium secundarium*. See § 119.

paunch in water, and when they take it out rub it with soda, and grind it in mortars with salt as above. In some cases people do not boil it but grind it up with salt and then add water and rinse it. It is used to make an eye-wash and for women's skins to remove ugly scars and spots and as a hair-wash. Its effect is to dry, to soften, to cool, to act as a gentle purge, to fill up cavities caused by ulcers, and to soften tumours; it is used as an ingredient in plasters serving these purposes, and for the emollient plasters mentioned above. Mixed with § 105. rue and myrtle and vinegar, it also removes erysipelas, and likewise chilblains if mixed with myrtle and wax.

XXXVI. *Minium* or cinnabar [a] also is found in *Cinnabar.* silver mines; it is of great importance among pigments at the present day, and also in old times it not only had the highest importance but even sacred associations among the Romans. Verrius gives a list of writers of unquestionable authority who say that on holidays it was the custom for the face of the statue of Jupiter himself to be coloured with cinnabar, as well as the bodies of persons going in a triumphal procession, and that Camillus was so coloured in his triumph, and that under the same ritual it was usual even in their day for cinnabar to be added to the unguents used at a banquet in honour of a triumph, and that one of the first duties of the Censors was to place a contract for painting Jupiter with cinnabar. For my own part I am quite at a loss to explain the origin of this custom, although at the present day the pigment in question is known to be in demand among the nations of Ethiopia whose chiefs colour themselves all over with it, and

ibi deorum simulacris colorem esse. quapropter diligentius persequemur omnia de eo.

113 XXXVII. Theophrastus LXXXX annis ante Praxibulum Atheniensium magistratum—quod tempus exit in urbis nostrae CCCXLVIIII [1] annum—tradit inventum minium a Callia Atheniense initio sperante aurum excoqui posse harenae rubenti in metallis argenti; hanc fuisse originem eius, reperiri autem
114 iam tum [2] in Hispania, sed durum et harenosum, item apud Colchos in rupe quadam inaccessa, ex qua iaculantes decuterent; id esse adulterum, optimum vero supra Ephesum Cilbianis agris harena cocci colorem habente, hanc teri, dein lavari farinam et quod subsidat iterum lavari; differentiam artis esse, quod alii minium faciant prima lotura, apud alios id esse dilutius, sequentis autem loturae optimum.

115 XXXVIII. Auctoritatem colori fuisse non miror. iam enim Troianis temporibus rubrica in honore erat Homero teste, qui naves ea commendat, alias circa pigmenta picturasque rarus. milton vocant Graeci
116 miniumque cinnabarim. unde natus error Indicae [3] cinnabaris nomine.[4] sic enim appellant illi saniem draconis elisi elephantorum morientium pondere

[1] CCCXLVIIII *Hermolaus Barbarus*: CCCCXXXVIIII *Casaubon*: CCXLVIIII.

[2] nativum *coni. Hardouin.*

[3] Indicae *K. C. Bailey*: indicio *B*: indico *rell.*

[4] cinnabaris nomine *cd. Par.* 6801: nominum (*om.* cinnabaris) *B*: nomine (*om.* cinnabaris) *rell.*: inscitia nominum *Mayhoff.*

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[a] *De Lap.* 59, 58.

[b] 315 B.C.

[c] This was really an exudation (still called 'dragon's blood') from species of the oriental plant *Dracaena* or *Pterocarpus.*

with whom the statues of the gods are of that colour. On that account we will investigate all the facts concerning it more carefully.

XXXVII. Theophrastus [a] states that cinnabar was discovered by an Athenian named Callias, 90 years before the archonship [b] of Praxibulus at Athens—this date works out at the 349th year of our city, and that Callias was hoping that gold could by firing be extracted from the red sand found in silver mines; and that this was the origin of cinnabar, although cinnabar was being found even at that time in Spain, but a hard and sandy kind, and likewise in the country of the Colchi on a certain inaccessible rock from which the natives dislodged it by shooting javelins, but that this is cinnabar of an impure quality whereas the best is found in the Cilbian territory beyond Ephesus, where the sand is of the scarlet colour of the kermes-insect; and that this is ground up and then the powder is washed and the sediment that sinks to the bottom is washed again; and that there is a difference of skill, some people producing cinnabar at the first washing while with others this is rather weak and the product of the second washing is the best. 405 B.C.

XXXVIII. I am not surprised that the colour had an important rank, for as far back as Trojan times red ochre was highly valued, as evidenced by Homer, who speaks of it as a distinguished colour for ships, although otherwise he rarely alludes to colours and paintings. The Greek name for it is 'miltos,' and they call *minium* 'cinnabar.' This gave rise to a mistake owing to the name 'Indian cinnabar,' for that is the name the Greeks give to the gore [c] of a snake crushed by the weight of dying elephants, *Il.* II. 637.

permixto utriusque animalis sanguine, ut diximus, neque est alius colos, qui in pictura proprie sanguinem reddat. illa cinnabaris antidotis medicamentisque utilissima est. at, Hercules, medici, quia cinnabarim vocant, utuntur hoc minio, quod[1] venenum esse paulo mox docebimus.

117 XXXIX. Cinnabari veteres quae etiam nunc vocant monochromata pingebant. pinxerunt et Ephesio minio, quod derelictum est, quia curatio magni operis erat. praeterea utrumque nimis acre existimabatur. ideo transiere ad rubricam et Sinopidem, de quibus suis locis dicam. cinnabaris adulteratur sanguine caprina aut sorbis tritis. pretium sincerae nummi L.

118 XL. Iuba minium nasci et in Carmania tradit, Timagenes[2] et in Aethiopia, sed neutro ex loco invehitur ad nos nec fere aliunde quam ex Hispania, celeberrimo Sisaponensi regione in Baetica miniario metallo vectigalibus populi Romani, nullius rei diligentiore custodia. non licet ibi perficere id excoquique[3]; Romam adfertur[4] vena signata, ad bina milia fere pondo annua, Romae autem lavatur, in vendendo pretio statuta[5] lege, ne modum excederet HS LXX in libras. sed adulteratur multis modis, unde
119 praeda societati. namque est alterum genus omni-

[1] cinnabarim minium v., u.h. quod *coni. Warmington.*
[2] Timaeus *coni. Pintianus.*
[3] excoquique *cdd.* (excoqui quae *B*: excoctique *cd. Leid. Voss.*): excoctaque *coni. Mayhoff.*
[4] *V.ll.* refertur, defertur, deferuntur: perferuntur *edd. vett.*
[5] *V.l.* statuto.

when the blood of each animal gets mixed together, as we have said; and there is no other colour that VIII. 34. properly represents blood in a picture. That kind of cinnabar is extremely useful for antidotes and medicaments. But our doctors, I swear, because they give the name of cinnabar to *minium* also, employ this *minium*, which as we shall soon show is a poison. § 124.

XXXIX. In old times 'dragon's-blood' cinnabar was used for painting the pictures that are still called monochromes, 'in one colour.' Cinnabar from Ephesus was also used for painting, but this has been given up because pictures in that colour were a great amount of trouble to preserve. Moreover both colours were thought excessively harsh; consequently painters have gone over to red-ochre and Sinopic ochre, pigments about which I shall XXXV. speak in the proper places. Cinnabar is adulterated 30 *sqq.* with goat's blood or with crushed service-berries. The price of genuine cinnabar is 50 sesterces a pound.

XL. Juba reports that cinnabar is also produced in Carmania, and Timagenes says it is found in Ethiopia as well, but from neither place is it exported to us, and from hardly any other either except from Spain, the most famous cinnabar mine for the revenues of the Roman nation being that of Almaden in the Baetic region, no item being more carefully safeguarded: it is not allowed to smelt and refine the ore upon the spot, but as much as about 2000 lbs. per annum is delivered to Rome in the crude state under seal, and is purified at Rome, the price in selling it being fixed by law established at 70 sesterces a pound, to prevent its going beyond limit. But it is adulterated in many ways, which is a source *Red lead and* of plunder for the company. For there is in fact *cinnabar.*

bus fere argentariis itemque plumbariis metallis, quod fit exusto lapide venis permixto, non ex illo, cuius vomicam argentum vivum appellavimus—is enim et ipse in argentum ⟨vivum⟩ [1] excoquitur—, sed ex aliis simul repertis. steriles etiam plumbi deprehenduntur [2] solo colore nec nisi in fornacibus rubescentes exustique tunduntur in farinam. hoc est secundarium minium perquam paucis notum,
120 multum infra naturales illas harenas. hoc ergo adulteratur minium in officinis sociorum, et vilius [3] Syrico. quonam modo Syricum fiat suo loco docebimus; sublini autem Syrico minium compendi ratio demonstrat. et alio modo pingentium furto opportunum est, plenos subinde abluentium penicillos.
121 sidit autem in aqua constatque furantibus. sincero cocci nitor esse debet, secundarii autem splendor in parietibus sentit [4] robiginem,[5] quamquam hoc robigo quaedam metalli est. Sisaponensibus autem miniariis sua vena harenae sine argento. excoquitur auri modo; probatur auro candente, fucatum enim

[1] vivum *add. K. C. Bailey.*
[2] de micae prehenduntur B^1: micae. deprehenduntur B^2: deprehenduntur.
[3] et vilius *Mayhoff*: et ubivis *Ian*: et vivis *B*: item *rell.*
[4] *V.l.* sentire.
[5] robiginem *K. C. Bailey*: plumbaginem *Mayhoff*: uliginem *Caesarius*: imaginem.

[a] Probably the true red-lead (prepared from cerusite, natural lead carbonate).
[b] Of sulphide of mercury. See § 111, note; § 118.
[c] This is not true.

another kind[a] of *minium*, found in almost all silver-mines, and likewise lead-mines, which is made by smelting a stone that has veins of metal running through it, and not obtained from the stone the round drops of which we have designated quick- § 99
silver—for that stone also if fired yields quicksilver—but from other stones found at the same time. These have no quicksilver and are detected only by their leaden colour, and only when they turn red in the furnaces, and after being thoroughly smelted they are pulverized by hammering. This gives a *minium* of second rate quality, which is known to very few people, and is much inferior to the natural sands we have mentioned. It is this then that is used for adulterating real *minium* in the factories of the company, but a cheaper kind is adulterated with Syrian: the preparation of the latter will be des- XXXV. 40.
cribed in the proper place; but the process of giving cinnabar and red-lead a treatment of Syrian is detected by calculation when the one is weighed against the other. Cinnabar also, with red-lead, affords an opportunity for pilfering by painters in another way, if they wash out their brushes immediately when full of paint; the cinnabar or the red-lead settles at the bottom of the water and stays there for the pilferers. Pure cinnabar ought to have the brilliant colour of the scarlet kermes-insect, while the shine of that of the second quality when used on wall-paintings is affected by rust, although this is itself a sort of metallic rust. In the cinnabar mines[b] of Almaden the vein of sand is pure, without silver. It is melted like gold[c]; it is assayed by means of gold made red hot, as if it has been adulterated it turns black, but if genuine

nigrescit, sincerum retinet colorem. invenio et calce adulterari, ac simili ratione ferri candentis lamna, si
122 non sit aurum, deprehendi. inlito solis atque lunae contactus inimicus. remedium, ut pariete siccato cera Punica cum oleo liquefacta candens saetis inducatur iterumque admotis gallae carbonibus inuratur ad sudorem usque, postea candelis subigatur ac deinde linteis puris, sicut et marmora nitescunt. qui minium in officinis poliunt, faciem laxis vesicis inligant, ne in respirando pernicialem pulverem trahant et tamen super [1] illas spectent. minium in voluminum quoque scriptura usurpatur clarioresque litteras vel in muro [2] vel in marmore, etiam in sepulchris, facit.

123 XLI. Ex secundario invenit vita et hydrargyrum in vicem argenti vivi, paulo ante dilatum. fit autem duobus modis: aereis mortariis pistillisque trito minio ex aceto aut patinis fictilibus impositum ferrea concha, calice coopertum, argilla superinlita, dein sub patinis accenso [3] follibus continuis igni atque ita calici [4] sudore deterso, qui fit argenti colore et aquae liquore. idem guttis dividi facilis et lubrico umore

[1] super *Mayhoff coll. Diosc.* V. 109: ut per *cdd.*
[2] muro *Detlefsen*: aere *Hübner*: auro *cdd.*
[3] accenso *quidam ap. Dalecamp*: accensum.
[4] *V.l.* calicis.

[a] This seems to be the meaning here; *secundario* would not refer to the minium of the second quality (see above, § 111, note; § 119), for hydrargyrum was made from the sulphide of mercury of § 111.

it keeps its colour. I find that it is also adulterated with lime, and this can be detected in a similar way with a sheet of red-hot iron if there is no gold available. A surface painted with cinnabar is damaged by the action of sunlight and moonlight. The way to prevent this is to let the wall dry and then to coat it with Punic wax melted with olive oil and applied by means of brushes of bristles while it is still hot, and then this wax coating must be again heated by bringing near to it burning charcoal made of plant-galls, till it exudes drops of perspiration, and afterwards smoothed down with waxed rollers and then with clean linen cloths, in the way in which marble is given a shine. Persons polishing cinnabar in workshops tie on their face loose masks of bladder-skin, to prevent their inhaling the dust in breathing, which is very pernicious, and nevertheless to allow them to see over the bladders. Cinnabar is also used in writing books, and it makes a brighter lettering for inscriptions on a wall or on marble even in tombs.

XLI. Of secondary importance [a] is the fact that experience has also discovered a way of getting hydrargyrum or artificial quicksilver as a substitute for real quicksilver; we postponed the description of this a little previously. It is made in two ways, §§ 64, 100.
by pounding red-lead in vinegar with a copper pestle in a copper mortar, or it is put in an iron shell in flat earthenware pans, and covered with a convex lid smeared on with clay, and then a fire is lit under the pans and kept constantly burning by means of bellows, and so the surface moisture (with the colour of silver and the fluidity of water) which forms on the lid is wiped off it. This moisture is also easily divided into drops and rains down freely with slippery

124 compluere.[1] quod cum venenum esse conveniat, omnia, quae de minio in medicinae usu traduntur, temeraria arbitror, praeterquam fortassis inlito capiti ventrive sanguinem sisti, dum ne qua penetret in viscera ac volnus attingat. aliter utendum non equidem censeam.

125 XLII. Hydrargyro argentum inauratur solum nunc prope, cum et in aerea simili modo duci debeat. sed eadem fraus, quae in omni parte vitae ingeniosissima est, viliorem excogitavit materiam, ut docuimus.

126 XLIII. Auri argentique mentionem comitatur lapis, quem coticulam appellant, quondam non solitus inveniri nisi in flumine Tmolo, ut auctor est Theophrastus, nunc vero passim. alii Heraclium, alii Lydium vocant. sunt autem modici, quaternas uncias longitudinis binasque latitudinis non excedentes. quod a sole fuit in iis, melius quam quod a terra. his coticulis periti cum e vena ut lima rapuerunt experimento ramentum,[2] protinus dicunt quantum auri sit in ea, quantum argenti vel aeris, scripulari differentia, mirabili ratione non fallente.

127 XLIV. Argenti duae differentiae. vatillis ferreis candentibus ramento inposito, quod candidum per-

[1] compluere *B*: confluere *rell.*
[2] experimento ramentum *L. C. Purser*: experimentum.

[a] Both kinds of minium—the sulphide of mercury and the lead carbonate—are poisonous.
[b] *De Lap.* 47, 46.

fluidity. And as cinnabar and red-lead[a] are admitted to be poisons, all the current instructions on the subject of its employment for medicinal purposes are in my opinion decidedly risky, except perhaps that its application to the head or stomach arrests hæmorrhage, provided that it does not find access to the vital organs or come in contact with a lesion. In any other way for my own part I would not recommend its employment.

XLII. At the present time silver is almost the only substance that is gilded with artificial quicksilver, though really a similar method ought to be used in coating copper. But the same fraudulence which is so extremely ingenious in every department of life has devised an inferior material, as we have shown. § 100.

XLIII. With the mention of gold and silver goes a description of the stone called the touch stone, formerly according to Theophrastus[b] not usually found anywhere but in the river Tmolus, but now found in various places. Some people call it Heraclian stone and others Lydian. The pieces are of a moderate size, not exceeding four inches in length and two in breadth. The part of these pieces that has been exposed to the sun is better than the part on the ground. When experts using this touchstone, like a file, have taken with it a scraping from an ore, they can say at once how much gold it contains and how much silver or copper, to a difference of a scruple, their marvellous calculation not leading them astray. *Touchstone.*

XLIV. There are two points in which silver shows a variation. A shaving that remains perfectly white when placed on white-hot iron shovels is passed

maneat, probatur. proxima bonitas rufo, nulla nigro. sed experimento quoque fraus intervenit. servatis in urina virorum vatillis inficitur ita ramentum obiter dum uritur candoremque mentitur. est aliquod experimentum politi et in halitu hominis, si sudet protinus nubemque discutiat.

128 XLV. Lamnas duci,[1] speciem[2] fieri[3] non nisi ex optimo posse creditum.[4] fuerat id integrum, sed id quoque iam fraude corrumpitur.

Est[5] natura mira imagines reddendi, quod repercusso aëre atque in oculos regesto fieri convenit. eadem vi sic[6] in speculi usu polita crassitudine paulumque propulsa dilatatur in inmensum magnitudo imaginum. tantum interest, repercussum illum ex-
129 cipiat an respuat. quin etiam pocula ita figurantur expulsis[7] intus crebris ceu speculis, ut vel uno intuente totidem populus imaginum fiat. excogitantur et monstrifica, ut in templo Zymrnae dicata. id evenit figura materiae. plurimum refert concava sint et poculi modo an parmae Threcidicae, media depressa an elata, transversa an obliqua, supina an infesta,

[1] duci et *cd. Par. Lat.* 6801: duci *rell.*: duci in *Mayhoff.*
[2] speciem *B*: specula *rell.*
[3] fieri *cdd.*: vitri *Mayhoff.*
[4] credimus *B.*
[5] est *Mayhoff*: sed.
[6] vi sic *Mayhoff*: vis *Sillig*: visi *B*: vi *cd. Par.* 6801: nisi *rell.*
[7] *V.l.* exsculptis.

[a] When it is concave.
[b] When it is convex or plane.
[c] *I.e.* the major axis of an oval mirror, or of a convex or concave oval centre of a special kind of mirror.

as good, while if it turns red it is of the next quality, and if black it has no value at all. But fraud has found its way even into this test; if the shovels are kept in men's urine the silver shaving is stained by it during the process of being burnt, and counterfeits whiteness. There is also one way of testing polished silver in a man's breath—if it at once forms surface moisture and dissipates the vapour.

Reflecting qualities and uses of silver. Mirrors.

XLV. It has been believed that only the best silver is capable of being beaten out into plates and producing an image. This was formerly a sound test, but nowadays this too is spoiled by fraud. Still, the property of reflecting images is marvellous; it is generally agreed that it takes place owing to the repercussion of the air which is thrown back into the eyes. In a similar way, owing to the same force, in employing a mirror if the thickness of the metal has been polished and beaten out into a slightly concave shape the size of the objects reflected is enormously magnified: such a difference does it make whether the surface welcomes[a] the air in question or flings it back.[b] Moreover bowls can be made of such a shape, with a number of looking-glasses so to speak beaten outward inside them, that if only a single person is looking into them a crowd of images is formed of the same number as the facets in question. Ingenuity even devises vessels that do conjuring tricks, for instance those deposited as votive offerings in the temple at Smyrna: this is brought about by the shape of the material, and it makes a very great difference whether the vessels are concave and shaped like a bowl or convex like a Thracian shield, whether their centre is recessed or projecting, whether the oval[c] is horizontal or oblique,

qualitate excipientis figurae torquente venientes um-
130 bras; neque enim est aliud illa imago quam digesta
claritate materiae accipientis umbra.[1] atque ut
omnia de speculis peragantur in hoc loco, optima aput
maiores fuerant Brundisina, stagno et aere mixtis.
praelata sunt argentea; primus fecit Pasiteles Magni
Pompei aetate. nuper credi coeptum certiorem
imaginem reddi auro opposito vitris.[2]

131 XLVI. Tinguit Aegyptus argentum, ut in vasis Anubim suum spectet, pingitque, non caelat, argentum. unde transiit materia et ad triumphales statuas; mirumque, crescit pretium fulgoris excaecati. id autem fit hoc modo; miscentur argento tertiae aeris Cyprii tenuissimi, quod coronarium vocant, et sulpuris vivi quantum argenti; conflantur ita in fictili circumlito argilla; modus coquendi, donec se ipsa opercula aperiant. nigrescit et ovi indurati luteo, ut tamen aceto et creta deteratur.

132 Miscuit denario triumvir Antonius ferrum, miscent aera falsae monetae,[3] alii et [4] ponderi [5] subtrahunt, cum sit iustum LXXXIIII e libris signari. igitur ars

[1] umbra *Ian*: umbram.
[2] vitris *K. C. Bailey*: vitris aversis *coni. D'Arcy Thompson*: aversis.
[3] *V.l.* falsa moneta.
[4] alii et *Mayhoff*: alii e *cd. Par.* 6801: alia *aut* aliae *aut* alii (*om.* et) *rell.*
[5] ponderi *Urlichs*: pondere *aut* ponderae *aut* pondera. alii de pondere *coni. Mayhoff.*

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[a] Cf. § 94 and note.
[b] *vitris* is K. C. Bailey's conjecture. The sentence cannot refer to *silver* mirrors. Roman glass mirrors, backed usually with lead, have been found, but seem to belong to a later time than Pliny.
[c] This was employed to make imitation gold crowns for use on the stage.

laid flat or placed upright, as the quality of the shape receiving the shadows twists them as they come: for in fact the image in a mirror is merely the shadow arranged by the brilliance of the material receiving it. And in order to complete the whole subject of mirrors in this place, the best of those known in old days were those made at Brindisi of a mixture of stagnum [a] and copper. Silver mirrors have come to be preferred; they were first made by Pasiteles in the period of Pompey the Great. But it has recently come to be believed that a more reliable reflection is given by applying a layer of gold to the back of glass.[b] *c.* 106–48 B.C.

XLVI. The people of Egypt stain their silver so as to see portraits of their god Anubis in their vessels; and they do not engrave but paint their silver. The use of that material thence passed over even to our triumphal statues, and, wonderful to relate, its price rises with the dimming of its brilliance. The method adopted is as follows: with the silver is mixed one third its amount of the very fine Cyprus copper called chaplet-copper [c] and the same amount of live sulphur as of silver, and then they are melted in an earthenware vessel having its lid stopped with potter's clay; the heating goes on till the lids of the vessels open of their own accord. Silver is also turned black by means of the yolk of a hard-boiled egg, although the black can be rubbed off with vinegar and chalk.

Debased and forged silver coinage.

The triumvir Antony alloyed the silver denarius with iron, and forgers put an alloy of copper in silver coins, while others also reduce the weight, the proper coinage being 84 denarii from a pound of silver. Consequently a method was devised of

facta denarios probare, tam iucunda plebei lege, ut Mario Gratidiano vicatim tota[1] statuas dicaverit. mirumque, in hac artium sola vitia discuntur et falsi denarii spectatur exemplar pluribusque veris denariis adulterinus emitur.

133 XLVII. Non erat apud antiquos numerus ultra centum milia; itaque et hodie multiplicantur haec, ut decies centena aut saepius dicantur. faenus hoc fecit nummusque percussus, et sic quoque aes alienum etiamnum appellatur. postea Divites cognominati, dummodo notum sit eum, qui primus hoc cognomen
134 acceperit, decoxisse creditoribus suis. ex eadem gente M. Crassus negabat locupletem esse nisi qui reditu annuo legionem tueri posset. in agris HS [MM] possedit Quiritium post Sullam divitissimus, nec fuit satis nisi totum Parthorum usurpasset aurum; atque ut memoriam quidem opum occupaverit—iuvat enim insectari inexplebilem istam habendi cupidinem—: multos postea cognovimus servitute liberatos opulentiores, pariterque tres Claudii principatu paulo ante Callistum, Pallantem, Narcissum.
135 atque ut hi omittantur, tamquam adhuc rerum

[1] totas *B, cd. Par.* 6801.

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[a] Crassus the so-called 'triumvir' was defeated by the Parthians at Carrhae (Haran) in 53 B.C., and assassinated when treating for peace. His head was cut off and sent to the Parthian king, who caused melted gold to be poured into its mouth, saying 'Sate thyself now with the metal for which when alive thou wert so greedy' (Dio Cassius XL. 27).

assaying the denarius, under a law that was so popular that the common people unanimously district by district voted statues to Marius Gratidianus. And it is a remarkable thing that in this alone among arts spurious methods are objects of study, and a sample of a forged denarius is carefully examined and the adulterated coin is bought for more than genuine ones. *Before 82 B.C.*

XLVII. In old days there was no number standing for more than 100,000, and accordingly even to-day we reckon by multiples of that number, using the expression times 'ten times one hundred thousand' or larger multiples. This was due to usury and to the introduction of coined money, and also on the same lines we still speak of money owed as 'somebody else's copper.' Afterwards 'Dives,' 'Rich,' became a family surname, though it must be stated that the man who first received this name ran through his creditors' money and went bankrupt. Afterwards Marcus Crassus, who was a member of the Rich family, used to say that nobody was a wealthy man except one who could maintain a legion of troops on his yearly income. He owned landed property worth two hundred million sesterces, being the richest Roman citizen after Sulla. Nor was he satisfied without getting possession of the whole of the Parthians' gold[a] as well; and although it is true he was the first to win lasting reputation for wealth—it is a pleasant task to stigmatize insatiable covetousness of that sort—we have known subsequently of many liberated slaves who have been wealthier, and three at the same time not long before our own days in the period of the emperor Claudius, namely Callistus, Pallas and Narcissus. And to omit these persons, *Examples of private and public wealth.* *A.D. 41–54.*

potiantur, C. Asinio Gallo C. Marcio Censorino cos. a. d. VI Kal. Febr. C. Caecilius C. l. Isidorus testamento suo edixit, quamvis multa bello civili perdidisset, tamen relinquere servorum [1] $\overline{\text{IIII}}$ CXVI, iuga boum $\overline{\text{III}}$ DC, reliqui pecoris $\overline{\text{CCLVII}}$, in numerato HS |$\overline{\text{DC}}$|,
136 funerari se iussit HS |$\overline{\text{XI}}$|.[2] congerant excedentes numerum opes, quota tamen portio erunt Ptolemaei, quem Varro tradit Pompeio res gerente circa Iudaeam octona milia equitum sua pecunia toleravisse, mille convivas totidem aureis potoriis, mutantem ea vasa cum ferculis, saginasse! quota vero ille ipse
137 —neque enim de regibus loquor—portio fuerit Pythis Bithyni, qui platanum auream vitemque nobiles illas Dario regi donavit, Xerxis copias, hoc est |$\overline{\text{VII}}$| $\overline{\text{LXXXVIII}}$[3] hominum, excepit epulo, stipendium quinque mensum frumentumque pollicitus, ut e quinque liberis in dilectu senectuti suae unus saltem concederetur! hunc quoque ipsum aliquis comparet Croeso regi! quae, malum, amentia est id in vita cupere, quod aut et servis contigerit aut ne in regibus quidem invenerit finem!

138 XLVIII. Populus R. stipem spargere coepit Sp. Postumio Q. Marcio cos.; tanta abundantia pecuniae erat, ut eam conferret L. Scipioni, ex qua is ludos

[1] se servorum *coni. Mayhoff.*
[2] |$\overline{\text{XII}}$| *Ian*; |$\overline{\text{X}}$| *Detlefsen*: XI milibus *cd. Par.* 6801: $\overline{\text{XI}}$ *rell.* (IXI *B*).
[3] |$\overline{\text{VII}}$| *Ian*: $\overline{\text{LXXXVIII}}$ *Sillig*: *varia cdd.*

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[a] *I.e.* still alive and ruling the Empire, so that it would be dangerous to speak of them.
[b] Probably Auletes, King of Egypt 80–51 B.C.
[c] See Herodotus VII. 27, 38.

as if they were still in sovereign power,[a] there is Gaius Caecilius Isidorus, the freedman of Gaius Caecilius who in the consulship of Gaius Asinius 8 B.C.
Gallus and Gaius Marcius Censorinus executed a will dated January 27 in which he declared that in spite of heavy losses in the civil war he nevertheless left 4116 slaves, 3600 pairs of oxen, 257,000 head of other cattle, and 60 million sesterces in cash, and he gave instructions for 1,100,000 to be spent on his funeral. But let them amass uncountable riches, yet what fraction will they be of the riches of the Ptolemy[b] who is recorded by Varro, at the time when Pompey was campaigning in the regions 63 B.C.
adjoining Judaea, to have maintained 8000 horse at his own charges, to have given a lavish feast to a thousand guests, with 1,000 gold goblets, which were changed at every course; and then what fraction would his own estate have been (for I am not speaking about kings) of that of the Bithynian Pythes,[c] who presented the famous gold plane tree and vine to King Darius, and gave a banquet to the forces of Xerxes, 480 B.C.
that is 788,000 men, with a promise of five months' pay and corn on condition that one at least of his five children when drawn for service should be left to cheer his old age? Also let anyone compare even Pythes himself with King Croesus! What madness it is (damn it all!), to covet a thing in our lifetime that has either fallen to the lot even of slaves or has reached no limit even in the desires of Kings!

XLVIII. The Roman nation began lavishing donations in the consulship of Spurius Postumius 186 B.C.
and Quintus Marcius: so abundant was money at that date that they contributed funds for Lucius Scipio to defray the cost of games which he cele-

fecit. nam quod Agrippae Menenio sextantes aeris in funus contulit, honoris id necessitatisque propter paupertatem Agrippae, non largitionis esse duxerim.[1]

139 XLIX. Vasa ex argento mire inconstantia humani ingenii variat nullum genus officinae diu probando. nunc Furniana,[2] nunc Clodiana, nunc Gratiana—etenim tabernas mensis adoptamus—, nunc anaglypta asperitatemque exciso [3] circa liniarum picturas
140 quaerimus, iam vero et mensas repositoriis inponimus ad sustinenda opsonia, interradimus alia, ut quam plurimum lima perdiderit. vasa cocinaria ex argento fieri Calvus orator quiritat; at nos carrucas argento caelare invenimus, nostraque aetate Poppaea coniunx Neronis principis soleas delicatioribus iumentis suis ex auro quoque induere iussit.

141 L. Triginta duo libras argenti Africanus sequens heredi reliquit idemque, cum de Poenis triumpharet, $\overline{\text{IIII}}$ CCCLXX pondo transtulit. hoc argenti tota Carthago habuit illa terrarum aemula, quot mensarum postea apparatu victa! Numantia quidem deleta idem Africanus in triumpho militibus X VII dedit. o

[1] *V.l.* dixerim. [2] *V.l.* Firmiana.
[3] *V.l.* excisa.

[a] In performance of a vow that he made in the war with Antiochus III, King of Syria, victoriously concluded in 190 B.C.

[b] These various kinds of plate are named after the silversmiths who introduced them. For the last cf. Martial IV. 39: Argenti genus omne comparasti . . . Nec desunt tibi vera Gratiana.

[c] Scipio Aemilianus.

brated.[a] As for the national contribution of one-sixth of an *as* per head for the funeral of Menenius 491 B.C. Agrippa, I should consider this as a mark of respect and also a measure rendered necessary by Agrippa's poverty, and not a matter of lavish generosity.

XLIX. Fashions in silver plate undergo marvel- *Silver plate, etc.* lous variations owing to the vagaries of human taste, no kind of workmanship remaining long in favour. At one time Furnian plate is in demand, at another Clodian, at another Gratian [b]—for we make even the factories feel at home at our tables—at another time the demand is for embossed plate and rough surfaces, where the metal has been cut out along the painted lines of the designs, while now we even fit removable shelves on our sideboards to carry the viands, and other pieces of plate we decorate with filigree, so that the file may have wasted as much silver as possible. The orator Calvus complain- 82–*c.* 47 B.C. ingly cries that cooking-pots are made of silver; but it is we who invented decorating carriages with chased silver, and it was in our day that the emperor Nero's wife Poppaea had the idea of even having her favourite mules shod with gold.

L. The younger Africanus [c] left his heir thirty- 129 B.C. two pounds weight of silver, and the same person paraded 4370 pounds of silver in his triumphal procession after the conquest of Carthage. This 146 B.C. was the amount of silver owned by the whole of Carthage, Rome's rival for the empire of the world, yet subsequently beaten in the show of plate on how many dinner-tables! Indeed after totally destroying Numantia the same Africanus at his triumph gave a 133–2 B.C. largess of seven denarii a head to his troops—warriors not unworthy of such a general who were

viros illo imperatore dignos, quibus hoc satis fuit! frater eius Allobrogicus primus omnium pondo mille habuit, at Drusus Livius in tribunatu plebei x̄.[1]
142 nam propter x [2] pondo notatum a censoribus triumphalem senem fabulosum iam videtur, item Catum Aelium, cum legati Aetolorum in consulatu prandentem in fictilibus adissent, missa ab iis vasa argentea non accepisse neque aliud habuisse argenti ad supremum vitae diem quam duo pocula, quae L. Paulus socer ei ob virtutem devicto Perseo rege donavisset.
143 invenimus legatos Carthaginiensium dixisse nullos hominum inter sese benignius vivere quam Romanos. eodem enim argento apud omnes cenitavisse ipsos. at, Hercules, Pompeium Paulinum, Arelatensis equitis Romani filium paternaque gente pellitum, $\overline{\text{XII}}$ pondo argenti habuisse apud exercitum ferocissi-
144 mis gentibus oppositum scimus; (LI.) lectos vero iam pridem mulierum totos operiri argento, pridem [3] et triclinia. quibus argentum addidisse primus traditur Carvilius Pollio eques Romanus, non ut operiret aut Deliaca specie faceret, sed Punicana; eadem et

[1] x̄ *coni. Mayhoff*: XI milia *cd. Par.* 6801: X *rell.* (✕ *B*).

[2] X *Freinshem coll. Liv. Ep.* XIV, *Val. Max.* II.9.4, *etc.*: quinque.

[3] pridem *coni. Mayhoff*: quaedam *cdd.* (quidem *cd. Par. Lat.* 6797).

[a] Q. Fabius Maximus Allobrogicus, consul in 121, and in reality a nephew of Aemilianus.

[b] P. Cornelius Rufinus.

[c] C. Fabricius and Q. Aemilius. Cf. § 153.

satisfied with that amount! His brother Allobrogicus[a] was the first person who ever owned 1000 lbs. weight of silver, whereas Livius Drusus when tribune of the people had 10,000 lbs. For that an old warrior,[b] honoured with a triumphal procession, incurred the notice of the censors[c] for possessing ten pounds weight of silver—that nowadays seems legendary, and the same as to Catus Aelius's not accepting the silver plate presented to him by the envoys from Aetolia who during his consulship had found him eating his lunch off earthenware, and as to his never till the last day of his life having owned any other silver but the two bowls given to him by his wife's father Lucius Paulus in recognition of his valour at the time when King Perseus was conquered. We read that the Carthaginian ambassadors declared that no race of mankind lived on more amicable terms with one another than the Romans, inasmuch as in a round of banquets they had found the same service of plate in use at every house! But, good heavens, Pompeius Paulinus the son of a Knight of Rome at Arles and descended on his father's side from a tribe that went about clad in skins, to our knowledge had 12,000 lbs. weight of silver plate with him when on service with an army confronted by tribes of the greatest ferocity; (LI.) while we know that ladies' bedsteads have for a long time now been entirely covered with silver plating, and so for long have banqueting-couches also. It is recorded that Carvilius Pollio, Knight of Rome, was the first person who had silver put on these latter, though not so as to plate them all over or make them to the Delos pattern, but in the Carthaginian style. In this latter style he also had bedsteads

121 B.C.

91 B.C.

275 B.C.

198 B.C.

168 B.C.

aureos fecit, nec multo post argentei Deliacos imitati sunt. quae omnia expiavit bellum civile Sullanum.

145 LII. Paulo enim ante haec factae sunt lances e centenis libris argenti, quas tunc cuper CL numero fuisse Romae constat multosque ob eas proscriptos dolo concupiscentium. erubescant annales, qui bellum civile illud talibus vitiis inputavere; nostra aetas fortior fuit. Claudii principatu servus eius Drusillanus[1] nomine Rotundus, dispensator Hispaniae citerioris, quingenariam lancem habuit, cui fabricandae[2] officina prius exaedificata fuerat, et comites eius octo ad CCL libras, quaeso, ut quam multi eas conservi eius

146 inferrent, aut quibus cenantibus? Cornelius Nepos tradit ante Sullae victoriam duo tantum triclinia Romae fuisse argentea, repositoriis argentum addi sua memoria coeptum. Fenestella, qui obiit novissimo Tiberii Caesaris principatu, ait et testudinea tum in usum venisse, ante se autem paulo lignea, rotunda, solida nec multo maiora quam mensas fuisse, se quidem puero quadrata et conpacta aut acere operta aut citro coepisse, mox additum argentum in

[1] *V.l.* Drusilianus.
[2] *V.l.* cum fabricando: quam fabricando *Detlefsen.*

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[a] By Sulla in 82 B.C.
[b] Fenestella died in A.D. 21, Tiberius in A.D. 37.

made of gold, and not long afterwards silver bedsteads were made, in imitation of those of Delos. All this extravagance however was expiated by the civil war of Sulla. 83–2 B.C.

Other silver furniture.

LII. In fact it was shortly before this period that silver dishes were made weighing a hundred pounds, and it is well-known that there were at that date over 150 of those at Rome, and that many people were sentenced to outlawry [a] because of them, by the intrigues of people who coveted them. History which has held vices such as these to be responsible for that civil war may blush with shame, but our generation has gone one better. Under the Emperor Claudius his slave Drusillanus, who bore A.D. 41–54.
the name of Rotundus, the Emperor's steward of Nearer Spain, possessed a silver dish weighing 500 lbs., for the manufacture of which a workshop had first been specially built, and eight others of 250 lbs. went with it as side-dishes, so that how many of his fellow-slaves, I ask, were to bring them in or who were to dine off them? Cornelius Nepos records that before the victory won by Sulla there were 82 B.C.
only two silver dinner-couches at Rome, and that silver began to be used for decorating sideboards within his own recollection. And Fenestella who died towards the end of the principate of Tiberius [b] says that tortoiseshell sideboards also came into fashion at that time, but a little before his day they had been solid round structures of wood, and not much larger than tables; but that even in his boyhood they began to be made square and of planks morticed together and veneered either with maple or citrus wood, while later silver was laid on at the corners and along the lines marking the joins, and

angulos lineasque per commissuras, tympana vero se iuvene appellata, tum a stateris et lances, quas antiqui magides vocaverant.

147 LIII. Nec copia argenti tantum furit vita, sed valdius paene manipretiis, idque iam pridem, ut ignoscamus nobis. delphinos quinis milibus sestertium [1] in libras emptos C. Gracchus habuit, L. vero Crassus orator duos scyphos Mentoris artificis manu caelatos HS c̄,[2] confessus tamen est numquam iis uti propter verecundiam ausum. scimus [3] eundem HS
148 v̄ī in singulas libras vasa empta habuisse. Asia primum devicta luxuriam misit in Italiam, siquidem L. Scipio in triumpho transtulit argenti caelati pondo mille et [4] cccc [5] et vasorum aureorum pondo MD anno conditae urbis DLXV. at eadem Asia donata [6] multo etiam gravius adflixit mores, inutiliorque victoria illa
149 hereditas Attalo rege mortuo fuit. tum enim haec emendi Romae in auctionibus regiis verecundia exempta est urbis anno DCXXII, mediis LVII annis erudita civitate amare etiam, non solum admirari, opulentiam externam, inmenso et Achaicae victoriae momento ad inpellendos mores, quae et ipsa in hoc intervallo anno

[1] sestertium *Hardouin*: sestertiis.
[2] c̄ *Urlichs*: c.
[3] scimus *Mayhoff*: scitum *coni. Ian*: constat *ed. Basil.*: sicut.
[4] mille et *Mayhoff*: milia *aut* M.
[5] cccc *B*: CCCL *rell.*
[6] domita *cd. Par.* 6801: domata *Gelen.*

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[a] *I.e.* Asia Minor and Syria, peace having been concluded with King Antiochus in 189 B.C.

[b] Attalus III, King of Pergamum 138–133 B.C., bequeathed his kingdom to Rome. Part of it became the province Asia.

[c] *I.e.* the destruction of Corinth by L. Mummius, 146 B.C.

when he was a young man they were called 'drums,' and then also the dishes for which the old name had been magides came to be called basins from their resemblance to the scales of a balance.

LIII. Yet it is not only for quantities of silver that there is such a rage among mankind but there is an almost more violent passion for works of fine handicraft; and this goes back a long time, so that we of to-day may excuse ourselves from blame. Gaius Gracchus had some figures of dolphins for 153–121 B.C. which he paid 5000 sesterces per pound, while the orator Lucius Crassus had a pair of chased goblets, 140–91 B.C. the work of the artist Mentor, that cost 100,000; yet admittedly he was too ashamed ever to use them. It is known to us that he likewise owned some vessels that he bought for 6000 sesterces per pound. It was the conquest of Asia [a] that first introduced luxury into Italy, inasmuch as Lucius Scipio carried in procession at his triumph 1400 lbs. of chased silverware and vessels of gold weighing 1500 lbs.: this was in the 565th year from the foundation of the city of Rome. But receiving Asia also as a gift 189 B.C. dealt a much more serious blow to our morals, and the bequest of it that came to us on the death of King Attalus [b] was more disadvantageous than the victory of Scipio. For on that occasion all scruples entirely disappeared in regard to buying these articles at the auctions of the king's effects at Rome—the date was the 622nd year of the city, and in the 132 B.C. interval of 57 years our community had learnt not merely to admire but also to covet foreign opulence; an impetus having also been given to manners by the enormous shock of the conquest of Achaia,[c] that victory itself also having during this interval

150 urbis DCVIII parta signa et tabulas pictas invexit. ne quid deesset, pariter quoque[1] luxuria nata est et Cathago sublata, ita congruentibus fatis, ut et liberet amplecti vitia et liceret. petiere et dignationem hinc aliqui veterum. C. Marius post victoriam Cimbricam cantharis potasse Liberi patris exemplo traditur, ille arator Arpinas et manipularis imperator.

151 LIV. Argenti usum in statuas primum divi Augusti temporum adulatione transisse falso existimatur. iam enim triumpho Magni Pompei reperimus translatam Pharnacis, qui primus regnavit in Ponto, argenteam statuam, item Mithridatis Eupatoris et
152 currus aureos argenteosque. argentum succedit aliquando et auro luxu feminarum plebis compedes sibi facientium, quas induere aureas mos tritior vetet. vidimus et ipsi Arellium Fuscum motum equestri ordine ob insignem calumniam, cum celebritatem[2] adsectarentur[3] adulescentium scholae, argenteos anulos habentem. et quid haec attinet colligere, cum capuli militum ebore etiam fastidito caelentur argento, vaginae catellis, baltea lamnis crepitent, iam vero

[1] quoque *Mayhoff*: que.
[2] celebritatem *B*: celebritate *rell.*
[3] adsectarentur *cdd.*: expectarentur *edd. vett.*: assectationem *Hermolaus Barbarus*: adsectaretur *coni. Warmington.*

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[a] He became king *c.* 190 B.C.
[b] Mithridates VI, King of Pontus, finally quelled in Pompey's campaigns.

of time introduced the statues and pictures won in the 608th year of the city. That nothing might be lacking, luxury came into being simultaneously, with the downfall of Carthage, a fatal coincidence that gave us at one and the same time a taste for the vices and an opportunity for indulging in them. Some of the older generation also sought to gain esteem from these sources. It is recorded that Gaius Marius after his victory over the Cimbrians drank from Bacchic tankards, in imitation of Father Liber—he, the ploughman of Arpino who rose to the position of general from the ranks!

146 B.C.

101 B.C.

Silver statues, rings, etc.

LIV. The view is held that the extension of the use of silver to statues was made in the case of statues of his late lamented Majesty Augustus, owing to the sycophancy of the period, but this is erroneous. We find that previously a silver statue of Pharnaces the First,[a] King of Pontus, was carried in the triumphal procession of Pompey the Great, as well as one of Mithridates Eupator,[b] and also chariots of gold and silver were used. Likewise silver has at some periods even supplanted gold, female luxury among the plebeians having its shoe buckles made of silver, as wearing gold buckles would be prohibited by the more common fashion. We have ourselves seen Arellius Fuscus, when he was expelled from the Equestrian order on a singularly false charge, wearing silver rings merely because classes of students were attracted to him by his fame. But what is the point of collecting these instances, when our soldiers' sword hilts are made of chased silver, even ivory not being thought good enough; and when their scabbards jingle with little silver chains and their belts with silver tabs, nay now-a-days our

61 B.C.

paedagogia in transitu virilitatis custodiantur argento, feminae laventur et nisi argentea solia fastidiant, eademque materia et cibis et probris serviat?
153 videret haec Fabricius et stratas argento mulierum balineas ita, ut vestigio locus non sit, cum viris lavantium! Fabricius, qui bellicos imperatores plus quam pateram et salinum habere ex argento vetabat, videret hinc dona fortium fieri aut in haec frangi! heu mores, Fabrici nos pudet!

154 LV. Mirum auro caelando neminem inclaruisse, argento multos. maxime tamen laudatus est Mentor, de quo supra diximus. quattuor paria ab eo omnino [1] facta sunt, ac iam nullum extare dicitur Ephesiae Dianae templi ac [2] Capitolini incendiis.
155 Varro se et aereum signum [3] eius habuisse scribit. proximi ab eo in admiratione Acragas et Boëthus et Mys fuere. exstant omnium opera hodie in insula Rhodiorum, Boëthi apud Lindiam Minervam, Acragantis in templo Liberi patris in ipsa Rhodo Centauros Bacchasque caelati scyphi, Myos in eadem aede Silenos et Cupidines. Acragantis et venatio in
156 scyphis magnam famam habuit. post hos celebratus est Calamis, et Antipatro qui [4] Satyrum in phiala

[1] vasorum *Thiersch*.
[2] ac *Warmington*: aut (iacet *cd. Par.* 6801).
[3] sinum *Havet*.
[4] Antipatro qui *Mayhoff*: Antipater quoque qui *Urlichs*: Antipater quoq *B*: A. quinque *rell.* (quique *cd. Par.* 6801).

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[a] C. Fabricius Luscinus, a man who held high offices *c.* 285–275, but died a poor man.
[b] See § 142.
[c] In 356 B.C.
[d] In 83 B.C.

schools for pages just at the point of adolescence wear silver badges as a safeguard, and women use silver to wash in and scorn sitting-baths not made of silver, and the same substance does service both for our viands and for our baser needs? If only Fabricius [a] could see these displays of luxury—women's bathrooms with floors of silver, leaving nowhere to set your feet—and the women bathing in company with men—if only Fabricius, who forbade [b] gallant generals to possess more than a dish and a saltcellar of silver, could see how nowadays the rewards of valour are made from the utensils of luxury, or else are broken up to make them! Alas for our present manners—Fabricius makes us blush!

LV. It is a remarkable fact that the art of chasing gold has not brought celebrity to anyone, whereas persons celebrated for chasing silver are numerous. The most famous however is Mentor of whom we spoke above. Four pairs of goblets were all that he ever made, but it is said that none of them now survive, owing to the burning of the Temple of Artemis of Ephesus [c] and of the Capitol.[d] Varro says in his writings that he also possessed a bronze statue by this sculptor. Next to Mentor the artists most admired were Acragas, Boethus and Mys. Works by all of these exist at the present day in the island of Rhodes—one by Boethus in the temple of Athena at Lindus, some goblets engraved with Centaurs and Bacchants by Acragas in the temple of Father Liber or Dionysus in Rhodes itself, goblets with Sileni and Cupids by Mys in the same temple. Hunting scenes by Acragas on goblets also had a great reputation. After these in celebrity is Calamis, and Diodorus who was said to have placed

Famous examples of artistic work in silver.

§ 147 *and* VII. 127.

gravatum somno conlocavisse verius quam caelasse dictus est Diodorus,[1] Stratonicus mox Cyzicenus, Tauriscus, item Ariston et Eunicus Mitylenaei laudantur et Hecataeus et circa Pompei Magni aetatem Pasiteles, Posidonius Ephesius, Hedys, Thracides,[2] qui proelia armatosque caelavit, Zopyrus, qui Areopagitas et iudicium Orestis in duobus scyphis HS $\overline{\text{XII}}$[3] aestimatis. fuit et Pytheas, cuius II unciae Ӿ $\overline{\text{X}}$ venierunt : Ulixes et Diomedes erant in phialae em-
157 blemate Palladium subripientes. fecit idem et cocos magiriscia appellatos parvolis potoriis et e quibus ne exemplaria quidem liceret exprimere; tam opportuna iniuriae subtilitas erat. habuit et Teucer crustarius famam, subitoque ars haec ita exolevit, ut sola iam vestustate censeatur usuque attritis caelaturis si nec[4] figura discerni possit auctoritas constet.
158 Argentum medicatis aquis inficitur atque adflatu salso, sic et[5] in mediterraneis Hispaniae.

LVI. In argenti et auri metallis nascuntur etiamnum pigmenta sil et caeruleum. sil proprie limus est. optimum ex eo quod Atticum vocatur, pretium in pondo libras Ӿ II; proximum marmorosum di-

[1] *lac. Mayhoff qui* Diodorus *suppl.* : *coni. et* Antipatro poetae Satyrum . . . caelasse dictus ⟨Diodorus⟩, Stratonicus.

[2] Hedys, Thracides *Furtwängler* : hedystrachides *B* : haedistadices, iedisthracides *aut alia rell.* : Hedystratides *Sillig* : Telesarchides *coni. Dilthey*.

[3] $\overline{\text{XII}}$ *Gelen* : |$\overline{\text{XII}}$| *B* : XII *rell.*

[4] si nec *Urlichs* : si ne *B* : ne *rell.*

[5] sic et *L. Poinsinet de Sivry* : sicut.

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[a] Who probably wrote an epigram (*Anth. Plan.* 248) stating that Diodorus 'put to sleep' the satyr. The MSS. of Pliny make Antipater the engraver, while in the Anthology the epigram is attributed to Plato the younger.

[b] At Athens for the murder of his mother, according to the story.

in a condition of heavy sleep rather than engraved on a bowl a Slumbering Satyr for Antipater.[a] Next praise is awarded to Stratonicus of Cyzicus, Tauriscus, also Ariston and Eunicus of Mitylene, and Hecataeus, and, around the period of Pompey the Great, Pasiteles, Posidonius of Ephesus, Hedys, Thracides who engraved battle scenes and men in armour, and Zopyrus who engraved the Athenian Council of Areopagus and the Trial of Orestes [b] on two goblets valued at 12,000 sesterces. There was also Pytheas, one of whose works sold at the price of 10,000 denarii for two ounces: it consisted of an embossed base of a bowl representing Odysseus and Diomede in the act of stealing the Palladium. The same artist also carved some very small drinking cups in the shape of cooks known as 'The Chefs in Miniature,' which it was not allowed even to reproduce by casts, so liable to damage was the fineness of the work. Also Teucer the artist in embossed work attained celebrity, and all of a sudden this art so declined that it is now only valued in old specimens, and authority attaches to engravings worn with use even if the very design is invisible.

c. 106–48 B.C.

Silver becomes tarnished by contact with water from springs containing minerals and by the salt breezes, as happens also even in the interior regions of Spain.[c]

Oxides and hydroxides of iron.

LVI. In gold and silver mines also are formed the pigments yellow ochre and blue. Yellow ochre [d] is strictly speaking a slime. The best kind comes from what is called Attic slime; its price is two denarii a pound. The next best is marbled ochre,

[c] The sentence is probably misplaced.
[d] Various oxides and hydroxides of iron.

midio Attici pretio. tertium genus est pressum,
159 quod alii Scyricum vocant, ex insula Scyro, iam et ex Achaia, quo utuntur ad picturae umbras, pretium in libras HS bini; dupondiis vero detractis quod lucidum vocant, e Gallia veniens. hoc autem et Attico ad lumina utuntur, ad abacos non nisi marmoroso, quoniam marmor in eo resistit amaritudini calcis. effoditur et ad XX ab urbe lapidem in montibus; postea uritur pressum appellantibus qui adulterant. sed esse falsum exustumque, amaritudine apparet et quoniam resolutum in pulverem est.

160 Sile pingere instituere primi Polygnotus et Micon, Attico dumtaxat. secuta aetas hoc ad lumina usa est, ad umbras autem Scyrico et Lydio. Lydium Sardibus emebatur, quod nunc obmutuit.[1]

161 LVII. Caeruleum harena est, huius genera tria fuere antiquitus: Aegyptium maxime[2] probatur,[3] Scythicum mox[4] diluitur facile et, cum teritur, in quattuor colores mutatur, candidiorem nigrioremve et crassiorem tenuioremve; praefertur huic etiamnum Cyprium. accessit his Puteolanum et Hispaniense, harena ibi confici coepta. tinguitur autem omne et in sua coquitur herba bibitque sucum. reliqua confectura eadem quae chrysocollae.

[1] *V.ll.* ommutuit, omittunt.
[2] *V.l.* quod maxime.
[3] *V.l.* probatum.
[4] mox *Mayhoff* (*coni. et* umore): hoc.

[a] Azurite, a basic copper carbonate.

which costs half the price of Attic. The third kind is dark ochre, which other people call Scyric ochre, as it comes from the island of Scyros, and nowadays also from Achaia, which they use for the shadows of a painting, price two sesterces a pound, while that called clear ochre, coming from Gaul, costs two asses less. This and the Attic kind they use for painting different kinds of light, but only marbled ochre for squared panel designs, because the marble in it resists the acridity of the lime. This ochre is also dug up in the mountains 20 miles from Rome. It is afterwards burnt, and by some people it is adulterated and passed off as dark ochre; but the fact that it is not genuine and has been burnt is shown by its acridity and by its crumbling into dust.

The custom of using yellow ochre for painting was first introduced by Polygnotus and Micon, but they only used the kind from Attica. The following period employed this for representing lights but ochre from Scyros and Lydia for shadows. Lydian ochre used to be sold at Sardis, but now it has quite gone out.

LVII. The blue pigment[a] is a sand. In old days *Azurite.* there were three varieties: the Egyptian is thought most highly of; next the Scythian mixes easily with water, and changes into four colours when ground, lighter or darker and coarser or finer; to this blue the Cyprian is now preferred. To these were added the Pozzuoli blue, and the Spanish blue, when blue sand-deposits began to be worked in those places. Every kind however undergoes a dyeing process, being boiled with a special plant and absorbing its juice; but the remainder of the process of manufac- §§ 86 *sqq.* ture is the same as with gold-solder.

162 Ex caeruleo fit quod vocatur lomentum, perficitur id lavando terendoque. hoc est caeruleo candidius. pretia eius X x[1] in libras, caerulei X viii. usus in creta; calcis inpatiens. nuper accessit et Vestorianum, ab auctore appellatum. fit ex Aegyptii levissima parte; pretium eius in libras X xi. idem et Puteolani usus, praeterque ad fenestras; cyanon[2]
163 vocant. non pridem adportari et Indicum coeptum est, cuius pretium X vii. ratio in pictura ad incisuras, hoc est umbras dividendas ab lumine. est et vilissimum[3] genus lomenti, quod[4] tritum vocant, quinis assibus aestimatum.

Caerulei sinceri experimentum in carbone ut flagret; fraus viola arida decocta in aqua sucoque per linteum expresso in cretam Eretriam. vis in medicina ut purget ulcera; itaque et emplastris adiciunt, item
164 causticis. teritur autem difficillime. sil in medendo leniter mordet adstringitque et explet ulcera. uritur in fictilibus, ut prosit.

Pretia rerum, quae usquam posuimus, non ignoramus alia aliis locis esse et omnibus paene mutari annis, prout navigatione constiterint aut ut quisque mercatus sit aut aliquis praevalens manceps annonam

[1] §§ 162–163 *numeri varie traduntur.*

[2] cyanon *Brotier ex coni. Durandi*: cylon *B*: *V.ll.* cyllon, cylonon, cynolon.

[3] *V.ll.* utilissimum, subtilissimum.

[4] *V.l.* quondam: quod dant *edd. vett*: quidam *Hermolaus Barbarus.*

From blue is made the substance called blue wash, which is produced by washing and grinding it. Blue wash is of a paler colour than blue, and it costs 10 denarii per pound, while blue costs 8 denarii. Blue is used on a surface of clay, as it will not stand lime. A recent addition has been Vestorian blue, called after the man Vestorius who invented it; it is made from the finest part of Egyptian blue, and costs 11 denarii per pound. Pozzuoli blue is employed in the same way, and also near windows[a]; it is called cyanos. Not long ago Indian blue or *Indigo.* indigo began to be imported, its price being 7 denarii; painters use it for dividing-lines, that is, for separating shadows from light. There is also a blue wash of a very inferior kind, called ground blue, valued at 5 asses.

The test of genuine Indian blue is that when laid on burning coal it should blaze; it is adulterated by boiling dried violets in water and straining the liquor through linen on to Eretrian earth.[b] Its use as a medicament is to clean out ulcers; consequently it is employed as an ingredient in plasters, and also in cauteries, but it is extremely difficult to pound up. Yellow ochre used as a drug has a gently mordant and astringent effect, and fills up ulcers. To make it beneficial it is burnt in earthenware vessels.

We are not unaware that the prices of articles which we have stated at various points differ in different places and alter nearly every year, according to the shipping costs or the terms on which a particular merchant has bought them, or as some dealer dominating the market may whip up the

[a] *I.e.* it does not lose its colour in the light.

[b] See p. 283, note *k*.

flagellet, non obliti Demetrium a tota Seplasia Neronis principatu accusatum apud consules; poni tamen necessarium fuit quae plerumque erant Romae, ut exprimeretur auctoritas rerum.

[a] A district in the city of Capua occupied by druggists and perfumers and sellers of pigments.

selling price; we have not forgotten that, under the emperor Nero, Demetrius was prosecuted before the Consuls by the entire Seplasia.[a] Nevertheless I have found it necessary to state the prices usual at Rome, in order to give an idea of a standard value of commodities. A.D. 54-68.

BOOK XXXIV

LIBER XXXIV

I. Proxime dicantur aeris metalla, cui et in usu proximum est pretium, immo vero ante argentum ac paene etiam ante aurum Corinthio, stipis quoque auctoritas, ut diximus. hinc aera militum, tribuni aerarii et aerarium, obaerati, aere diruti. docuimus quamdiu populus Romanus aere tantum signato usus esset: et alia re [1] vetustas aequalem urbi auctoritatem eius declarat, a rege Numa collegio tertio aerarium fabrum instituto.

2 II. Vena quo dictum est modo foditur ignique perficitur. fit et e lapide aeroso, quem vocant cadmean, celebri trans maria et quondam in Campania, nunc et in Bergomatium agro extrema parte Italiae; ferunt nuper etiam in Germania provincia repertum. fit et ex alio lapide, quem chalcitim appellant, in

[1] alia re *Mayhoff* (*qui et* alio *coni.*): alta *coni. Ian*: alia.

[a] The word *aes* usually means a prepared alloy of copper and tin, that is, bronze; it also included brass (alloy of copper and zinc). Much ancient *aes* contained lead. Pure copper was properly called *aes Cyprium*. Note that native copper ore or metallic copper is not common in the Old World, but the ancients discovered that it could be produced artificially by heating the much more plentiful oxides, sulphides, silicates, and carbonates of copper.

[b] The others were the College of Priests and the College of Augurs.

[c] Apparently mineral calamine and smithsonite = silicate and carbonate of zinc; cf. § 100.

BOOK XXXIV

I. Let our next subject be ores, etc., of copper and bronze [a] the metals which in point of utility have the next value; in fact Corinthian bronze is valued before silver and almost even before gold; and bronze is also the standard of payments in money as we have said: hence *aes* is embodied in the terms denoting the pay of soldiers, the treasury paymasters and the public treasury, persons held in debt, and soldiers whose pay is stopped. We have pointed out for what a long time the Roman nation used no coinage except bronze; and by another fact antiquity shows that the importance of bronze is as old as the city—the fact that the third corporation [b] established by King Numa was the Guild of Coppersmiths.

Base metals. *Bronze and copper.* XXXIII. 43, 138. XXXIII. 42 *sqq.* *Trad. date* 715–672 B.C.

II. The method followed in mining deposits of copper and purifying the ore by firing is that which has been stated. The metal is also got from a coppery stone called by a Greek name *cadmea*,[c] a kind in high repute coming from overseas and also formerly found in Campania and at the present day in the territory of Bergamo on the farthest confines of Italy; and it is also reported to have been recently found in the province [d] of Germany. In Cyprus, where copper was first discovered, it is also

Copper. XXXII. 95 *sqq.*

[d] Only the region of the left bank of the Rhine is meant.

Cypro, ubi prima aeris inventio, mox vilitas praecipua reperto in aliis terris praestantiore maximeque aurichalco, quod praecipuam bonitatem admirationemque diu optinuit nec reperitur longo iam
3 tempore effeta tellure. proximum bonitate fuit Sallustianum in Ceutronum Alpino tractu, non longi et ipsum aevi, successitque ei Livianum in Gallia. utrumque a metallorum dominis appellatum, illud ab
4 amico divi Augusti, hoc a coniuge. velocis defectus Livianum quoque; certe admodum exiguum invenitur. summa gloriae nunc in Marianum conversa, quod et Cordubense dicitur. hoc a Liviano cadmean maxime sorbet et aurichalci bonitatem imitatur in sestertiis dupondiariisque, Cyprio suo assibus contentis. et hactenus nobilitas in aere naturali[1] se habet.

5 III. Reliqua genera cura constant, quae suis locis reddentur, summa claritate ante omnia indicata. quondam aes confusum auro argentoque miscebatur, et tamen ars pretiosior erat; nunc incertum est, peior haec sit an materia, mirumque, cum ad infinitum operum pretia creverint, auctoritas artis extincta est.

[1] naturali *coni. Mayhoff*: naturalis.

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[a] See § 117, note.

[b] *Aurichalcum*, the right word being probably *orichalcum* = ὀρείχαλκος, 'mountain-copper,' that is yellow copper ore and the brass made from it.

[c] Named after the great Marius (155–86 B.C.).

obtained from another stone also, called chalcitis,[a] copper ore; this was however afterwards of exceptionally low value when a better copper was found in other countries, and especially gold-copper,[b] which long maintained an outstanding quality and popularity, but which for a long time now has not been found, the ground being exhausted. The next in quality was the Sallustius copper, occurring in the Alpine region of Haute Savoie, though this also only lasted a short time; and after it came the Livia copper in Gaul: each was named from the owners of the mines, the former from the friend of Augustus and the latter from his wife. Livia copper also quickly gave out: at all events it is found in very small quantity. The highest reputation has now gone to the Marius[c] copper, also called Cordova copper; next to the Livia variety this kind most readily absorbs *cadmea* and reproduces the excellence of gold-copper in making sesterces and double-*as* pieces, the single *as* having to be content with its proper Cyprus copper. That is the extent of the high quality contained in natural bronze and copper.

III. The remaining kinds are made artificially, and will be described in their proper places, the most distinguished sorts being indicated first of all. Formerly copper used to be blended with a mixture of gold and silver, and nevertheless artistry was valued more highly than the metal; but nowadays it is a doubtful point whether the workmanship or the material is worse, and it is a surprising thing that, though the prices paid for these works of art have grown beyond all limit, the importance attached to this craftsmanship of working in metals has quite disappeared. For this, which formerly used

quaestus enim causa, ut omnia, exerceri coepta est quae gloriae solebat—ideo etiam deorum adscripta operi, cum proceres gentium claritatem et hac via quaererent—, adeoque exolevit fundendi aeris pretiosi ratio, ut iam diu ne fortuna quidem in ea re ius artis habeat.

6 Ex illa autem antiqua gloria Corinthium maxime laudatur. hoc casus miscuit Corintho, cum caperetur, incensa, mireque circa id multorum adfectatio furuit,[1] quippe cum tradatur non alia de causa Verrem, quem M. Cicero damnaverat, proscriptum cum eo ab Antonio, quoniam [2] Corinthiis cessurum se ei negavisset. ac mihi maior pars eorum simulare eam scientiam videtur ad segregandos sese a ceteris magis quam intellegere aliquid ibi suptilius; et
7 hoc paucis docebo. Corinthus capta est olympiadis CLVIII anno tertio, nostrae urbis DCVIII, cum ante haec saecula [3] fictores nobiles esse desissent, quorum isti omnia signa hodie Corinthia appellant. quapropter ad coarguendos eos ponemus artificum aetates; nam urbis nostrae annos ex supra dicta comparatione olympiadum colligere facile erit.

[1] furuit *Warmington*: furit *Sillig, Ian*: fuerit *cdd.* (fuit *cd. Par.* 6801).
[2] quoniam *Ian*: quam quoniam *coni. Sillig*: qn̄m *B*: quam *rell.* (quam quod *cd. Par.* 6801).
[3] saeculo *quid. ap. Dalecamp.*

[a] *I.e.* Hephaestus or Vulcan.
[b] Or 'has won praise normally due to art.'
[c] Corinth was destroyed by the Roman forces under Mummius 146 B.C.

to be practised for the sake of glory—consequently it was even attributed to the workmanship of gods,[a] and the leading men of all the nations used to seek for reputation by this method also—has now, like everything else, begun to be practised for the sake of gain; and the method of casting costly works of art in bronze has so gone out that for a long time now not even luck in this matter has had the privilege of producing art.[b]

Of the bronze which was renowned in early days, the Corinthian is the most highly praised. This is a compound that was produced by accident, when Corinth was burned[c] at the time of its capture; and there has been a wonderful mania among many people for possessing this metal—in fact it is recorded that Verres, whose conviction Marcus Cicero had procured, was, together with Cicero, proscribed by Antony for no other reason than because he had refused to give up to Antony some pieces of Corinthian ware; and to me the majority of these collectors seem only to make a pretence of being connoisseurs, so as to separate themselves from the multitude, rather than to have any exceptionally refined insight in this matter; and this I will briefly show. Corinth was taken in the third year of the 158th Olympiad, which was the 608th year of our city, when for ages there had no longer been any famous artists in metalwork; yet these persons designate all the specimens of their work as Corinthian bronzes. In order therefore to refute them we will state the periods to which these artists belong; of course it will be easy to turn the Olympiads into the years since the foundation of our city by referring to the two corresponding dates given

Corinthian bronze.

70 B.C.

43 B.C.

146 B.C.

sunt ergo vasa tantum Corinthia, quae isti elegantiores modo ad esculenta transferunt, modo in lucernas aut trulleos nullo munditiarum dispectu.[1]

8 eius aeris [2] tria genera: candidum argento nitore quam proxime accedens, in quo illa mixtura praevaluit; alterum, in quo auri fulva natura; tertium, in quo aequalis omnium temperies fuit. praeter haec est cuius ratio non potest reddi, quamquam hominis manu est,[3] at fortuna temperatur [4] in simulacris signisque illud suo colore pretiosum ad iocineris imaginem vergens, quod ideo hepatizon appellant, procul a Corinthio, longe tamen ante Aegineticum atque Deliacum, quae diu optinuere principatum.

9 IV. Antiquissima aeris gloria Deliaco fuit, mercatus in Delo celebrante toto orbe, et ideo cura officinis. tricliniorum pedibus fulcrisque ibi prima aeris nobilitas, pervenit deinde et ad deum simulacra effigiemque hominum et aliorum animalium.

10 V. Proxima laus Aeginetico fuit, insula et ipsa eo,[5] nec quod ibi gigneretur,[6] sed officinarum temperatura, nobilitata. bos aereus inde captus in foro boario est Romae. hoc erit exemplar Aeginetici

[1] *V.l.* despectu.
[2] eius aeris *Warmington*: aeris *coni. Mayhoff*: eius.
[3] manus est *Mayhoff*: manu facta *edd. vett.*: manus et *B*: manu sed *aut* manus sed *rell.*
[4] *V.l.* temperamentum: temperatum *C. F. W. Müller.*
[5] eo *Mayhoff*: est.
[6] gigneretur *Sillig*: signetur *aut* gignens *aut* gimens.

[a] Or 'for the neatness of the workmanship.'

above. The only genuine Corinthian vessels are then those which your connoisseurs sometimes convert into dishes for food and sometimes into lamps or even washing basins, without nice regard for decency.[a] There are three kinds of this sort of bronze: a white variety, coming very near to silver in brilliance, in which the alloy of silver predominates; a second kind, in which the yellow quality of gold predominates, and a third kind in which all the metals were blended in equal proportions. Besides these there is another mixture the formula for which cannot be given, although it is man's handiwork; but the bronze valued in portrait statues and others for its peculiar colour, approaching the appearance of liver and consequently called by a Greek name 'hepatizon' meaning 'liverish,' is a blend produced by luck; it is far behind the Corinthian blend, yet a long way in front of the bronze of Aegina and that of Delos which long held the first rank.

Delian bronze.

IV. The Delian bronze was the earliest to become famous, the whole world thronging the markets in Delos; and hence the attention paid to the processes of making it. It was at Delos that bronze first came into prominence as a material used for the feet and framework of dining-couches, and later it came to be employed also for images of the gods and statues of men and other living things.

Aeginetan bronze.

V. The next most famous bronze was the Aeginetan; and the island of Aegina itself became celebrated for it, though not because the metal copper was mined there but because of the compounding done in the workshops. A bronze ox looted from Aegina stands in the cattle-market at Rome, and will serve as a specimen of Aegina bronze,

aeris, Deliaci autem Iuppiter in Capitolio in Iovis Tonantis aede. illo aere Myron usus est, hoc Polycletus, aequales atque condiscipuli; sic [1] aemulatio et in materia fuit.

VI. Privatim Aegina candelabrorum superficiem
11 dumtaxat elaboravit, sicut Tarentum scapos. in iis ergo iuncta commendatio officinarum est. nec pudet tribunorum militarium salariis emere, cum ipsum nomen a candelarum lumine inpositum appareat. accessio candelabri talis fuit Theonis iussu praeconis Clesippus fullo gibber et praeterea et alio foedus aspectu, emente id Gegania HS $\overline{L}$. eadem ostentante in convivio empta ludibrii causa
12 nudatus atque inpudentia [2] libidinis receptus in torum, mox in testamentum, praedives numinum vice illud candelabrum coluit et hanc Corinthiis fabulam adiecit, vindicatis tamen moribus nobili sepulchro, per quod aeterna supra terras Geganiae dedecoris memoria duraret. sed cum esse nulla

[1] sic *Mayhoff*: sit B^1: sed.
[2] impotentia *Gelen.*

[a] Built in 22 B.C.
[b] Myron fl. *c.* 475 B.C., Polyclitus *c.* 435. See pp. 168–171.
[c] *I.e.* the sockets holding the candles, the other parts being the stems and the feet.

while that of Delos is seen in the Zeus or Jupiter in the temple[a] of Jupiter the Thunderer on the Capitol. Aegina bronze was used by Myron and that from Delos by Polyclitus, who were contemporaries[b] and fellow-pupils; thus there was rivalry between them even in their choice of materials.

VI. Aegina specialized in producing only the upper parts[c] of chandeliers, and similarly Taranto made only the stems, and consequently credit for manufacture is, in the matter of these articles, shared between these two localities. Nor are people ashamed to buy these at a price equal to the pay of a military tribune, although they clearly take even their name from the lighted candles they carry. At the sale of a chandelier of this sort by the instructions of the auctioneer (named Theon) selling it there was thrown in as part of the bargain the fuller Clesippus a humpback and also of a hideous appearance in other respects besides, the lot being bought by a woman named Gegania for 50,000 sesterces. This woman gave a party to show off her purchases, and for the mockery of the guests the man appeared with no clothes on; his mistress conceiving an outrageous passion for him admitted him to her bed and later gave him a place in her will. Thus becoming excessively rich he worshipped the lampstand in question as a divinity and so caused this story to be attached to Corinthian lampstands in general, though the claims of morality were vindicated by his erecting a noble tombstone to perpetuate throughout the living world for all time the memory of Gegania's shame. But although it is admitted that there are no lampstands made of *Chandeliers.*

Corinthia candelabra constet, nomen id praecipue in his celebratur, quoniam Mummi victoria Corinthum quidem diruit, sed e compluribus Achaiae oppidis simul aera dispersit.

13 VII. Prisci limina etiam ac valvas in templis ex aere factitavere. invenio et a Cn. Octavio, qui de Perseo rege navalem triumphum egit, factam porticum duplicem ad circum Flaminium, quae Corinthia sit appellata a capitulis aereis columnarum, Vestae quoque aedem ipsam Syracusana superficie tegi placuisse. Syracusana sunt in Pantheo capita columnarum a M. Agrippa posita. quin etiam privata opulentia eo modo usurpata est. Camillo inter crimina obiecit Spurius Carvilius quaestor, ostia quod aerata haberet in domo.

14 VIII. Nam triclinia aerata abacosque et monopodia Cn. Manlium Asia devicta primum invexisse triumpho suo, quem duxit anno urbis DLXVII, L. Piso auctor est, Antias quidem heredes L. Crassi oratoris multa etiam triclinia aerata vendidisse. ex aere factitavere et cortinas tripodum nomine [et][1] Delphicas, quoniam donis[2] maxime Apollini Delphico dicabantur. placuere et lychnuchi pensiles in delubris

[1] et *Mayhoff*: ac *B*: a *cd. Leid. Voss. m.* 1: *om. rell.*
[2] donis *cdd. pler.*: ludis *cd. Poll.*: erat *B*: aeratae *Urlichs*: eae *Ian*: dono *coni. Warmington.*

Corinthian metal, yet this name specially is commonly attached to them, because although Mummius's victory destroyed Corinth, it caused the dispersal of bronzes from a number of the towns of Achaia at the same time.

VII. In early times the lintels and folding doors of temples as well were commonly made of bronze. *Various uses of bronze.* I find that also Gnaeus Octavius, who was granted a triumph after a sea-fight against King Perseus, 169 B.C. constructed the double colonnade at the Flaminian circus which owing to the bronze capitals of its columns 167 B.C. has received the name of the Corinthian portico, and that a resolution was passed that even the temple of Vesta should have its roof covered with an outer coating of Syracusan metal. The capitals of the pillars in the Pantheon which were put up by Marcus Agrippa are of Syracusan metal. 27 B.C. Moreover even private opulence has been employed in similar uses: one of the charges brought against Camillus by the quaestor Spurius Carvilius was that in his house he had doors covered with bronze. 391 B.C.

VIII. Again, according to Lucius Piso dinner-couches and panelled sideboards and one-leg tables decorated with bronze were first introduced by Gnaeus Manlius at the triumph which he celebrated in the 567th year of the city after the conquest of Asia; 187 B.C. and as a matter of fact Antias states that the heirs of Lucius Crassus the orator also sold a number of dinner couches decorated with bronze. It was even customary for bronze to be used for making the cauldrons on tripods called Delphic cauldrons because they used to be chiefly dedicated as gifts to Apollo of Delphi; also lamp-holders were popular suspended from the ceiling in temples or with their

aut arborum mala ferentium modo lucentes, quale est in templo Apollinis Palatini quod Alexander Magnus Thebarum expugnatione captum in Cyme dicaverat eidem deo.

15 IX. Transiit deinde ars vulgo ubique ad effigies deorum. Romae simulacrum ex aere factum Cereri primum reperio ex peculio Sp. Cassi, quem regnum adfectantem pater ipsius interemerit. transiit et a diis ad hominum statuas atque imagines multis modis. bitumine antiqui tinguebant eas, quo magis mirum est placuisse auro integere. hoc nescio an Romanum fuerit inventum; certe etiam nomen non[1]
16 habet vetustum.[2] effigies hominum non solebant exprimi nisi aliqua inlustri causa perpetuitatem merentium, primo sacrorum certaminum victoria maximeque Olympiae, ubi omnium, qui vicissent, statuas dicari mos erat, eorum vero, qui ter ibi superavissent, ex membris ipsorum similitudine
17 expressa, quas iconicas vocant. Athenienses nescio an primis omnium Harmodio et Aristogitoni tyrannicidis publice posuerint statuas. hoc actum est eodem anno, quo et Romae reges pulsi. excepta deinde res est a toto orbe terrarum humanissima

[1] nomen non *B*: romae non *rell.*: Romae nomen *Sillig.*
[2] vetustum *B*: vetustatem *rell.*

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[a] Dedicated by Augustus in 27 B.C.
[b] Probably to provide a protective polish.
[c] From the Greek εἰκών, εἰκωνικός.
[d] By Antenor. The conspiracy of Harmodius and Aristogeiton took place in 514–513 B.C. A marble copy of Critius' and Nesiotes' later substitute still exists. See note on pp. 256–257.

lights arranged to look like apples hanging on trees, like the specimen in the temple [a] of Apollo of the Palatine which had been part of the booty taken by Alexander the Great at the storming of Thebes and dedicated by him to the same deity at Cyme. 335–4 B.C.

Statues of bronze at Rome.

IX. But after a time this art in all places came to be usually devoted to statues of gods. I find that the first image of a god made of bronze at Rome was that dedicated to Ceres and paid for out of the property of Spurius Cassius who was put to death by his own father when trying to make himself king. 485 B.C. The practice passed over from the gods to statues and representations of human beings also, in various forms. In early days people used to stain statues with bitumen,[b] which makes it the more remarkable that they afterwards became fond of covering them with gold. This was perhaps a Roman invention, but it certainly has a name of no long standing at Rome. It was not customary to make effigies of human beings unless they deserved lasting commemoration for some distinguished reason, in the first case victory in the sacred contests and particularly those at Olympia, where it was the custom to dedicate statues of all who had won a competition; these statues, in the case of those who had been victorious there three times, were modelled as exact personal likenesses of the winners—what are called iconicae,[c] portrait statues. I rather believe that the first portrait statues [d] officially erected at Athens were those of the tyrannicides Harmodius and Aristogeiton. This happened in the same year 510 B.C. as that in which the Kings were also driven out at Rome. The practice of erecting statues from a most civilized sense of rivalry was afterwards

Greek portrait-statues.

ambitione, et in omnium municipiorum foris statuae ornamentum esse coepere propagarique[1] memoria hominum et honores legendi aevo basibus inscribi, ne in sepulcris tantum legerentur. mox forum et in domibus privatis factum atque in atriis: honos clientium instituit sic colere patronos.

18 X. Togatae effigies antiquitus ita dicabantur. placuere et nudae tenentes hastam ab epheborum e gymnasiis exemplaribus; quas Achilleas vocant. Graeca res nihil velare, at contra Romana ac militaris thoraces addere. Caesar quidem dictator loricatam sibi dicari in foro suo passus est. nam Lupercorum habitu tam noviciae sunt quam quae nuper prodiere paenulis indutae. Mancinus eo habitu sibi statuit,
19 quo deditus fuerat. notatum ab auctoribus et L. Accium poetam in Camenarum aede maxima forma statuam sibi posuisse, cum brevis admodum fuisset. equestres utique statuae Romanam celebrationem habent, orto sine dubio a Graecis exemplo. sed illi celetas tantum dicabant in sacris victores,

[1] propagarique *B*: prorogarique *rell.*

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[a] *Forum Caesaris* or *Forum Iulium* was built by Julius Caesar in the eighth region of the city, near the temple of Janus and the old forum, which had become too small.

[b] Mancinus, consul 137 B.C., in a war with the Numantines made a treaty which the senate refused to ratify, and he was handed over to the enemy though they refused to receive him. He seems to have regarded this as discreditable to the senate but not to himself.

taken up by the whole of the world, and the custom proceeded to arise of having statues adorning the public places of all municipal towns and of perpetuating the memory of human beings and of inscribing lists of honours on the bases to be read for all time, so that such records should not be read on their tombs only. Soon after a publicity centre was established even in private houses and in our own halls: the respect felt by clients inaugurated this method of doing honour to their patrons.

X. In old days the statues dedicated were simply clad in the toga. Also naked figures holding spears, made from models of Greek young men from the gymnasiums—what are called figures of Achilles—became popular. The Greek practice is to leave the figure entirely nude, whereas Roman and military statuary adds a breastplate: indeed the dictator Cæsar gave permission for a statue wearing a cuirass to be erected in his honour in his Forum.[a] As for the statues in the garb of the Luperci, they are modern innovations, just as much as the portrait-statues dressed in cloaks that have recently appeared. Mancinus [b] set up a statue of himself in the dress that he had worn when surrendered to the enemy. It has been remarked by writers that the poet Lucius Accius also set up a very tall statue of himself in the shrine of the Latin Muses, although he was a very short man. Assuredly equestrian statues are popular at Rome, the fashion for them having no doubt been derived from Greece; but the Greeks used only to erect statues of winners of races on horse-back at their sacred contests, although subsequently they also erected statues of

Greek and Roman styles.

49–44 B.C.

170–*c.* 85 B.C.

postea vero et qui bigis vel quadrigis vicissent; unde et nostri currus nati in iis, qui triumphavissent. serum hoc, et in iis non nisi a divo Augusto seiuges, sicut[1] elephanti.

20 XI. Non vetus et bigarum celebratio in iis, qui praetura functi curru vecti essent per circum; antiquior columnarum, sicuti C. Maenio, qui devicerat priscos Latinos, quibus ex foedere tertias praedae populus Romanus praestabat, eodemque in consulatu in suggestu rostra devictis Antiatibus fixerat anno urbis ccccxvi, item C. Duillio, qui primus navalem triumphum egit de Poenis, quae est etiam nunc in
21 foro, item L. Minucio praefecto annonae extra portam Trigeminam unciaria stipe conlata—nescio an primo honore tali a populo, antea enim a senatu erat,—praeclara res, ni frivolis coepisset initiis. namque et Atti Navi statua fuit ante curiam—basis eius conflagravit curia incensa P. Clodii funere—;

[1] sicut et *edd. vett.*: aut *Eugénie Sellers.*

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[a] For purposes which were not religious. For a dedication of a six-horsed chariot in 189 B.C., cf. Livy, XXXVIII. 35, 4.

[b] For the surviving inscription of the *Columna Rostrata* see *Remains of Old Latin*, IV, pp. 128–131.

[c] Famous augur under King Tarquinius Priscus (traditional dates 616–579 B.C.).

winners with two-horse or four-horse chariots; and this is the origin of our chariot-groups in honour of those who have celebrated a triumphal procession. But this belongs to a late date, and among those monuments it was not till the time of his late lamented Majesty Augustus that chariots with six horses occurred,[a] and likewise elephants.

Roman statues.

XI. The custom of erecting memorial chariots with two horses in the case of those who held the office of praetor and had ridden round the Circus in a chariot is not an old one; that of statues on pillars is of earlier date, for instance the statue of honour of Gaius Maenius who had vanquished the Old Latins to whom the Roman nation gave by treaty a third part of the booty won from them. It was in the same consulship that the nation, after defeating the people of Antium, had fixed on the platform the beaked prows of ships taken in the victory over the people of Antium, in the 416th year of the city of Rome; and similarly the statue to Gaius Duillius, who was the first to obtain a naval triumph over the Carthaginians—this statue still stands in the forum [b]—and likewise that in honour of the praefect of markets Lucius Minucius outside the Triplets Gate, defrayed by a tax of one-twelfth of an *as* per head. I rather think this was the first time that an honour of this nature came from the whole people; previously it had been bestowed by the senate: it would be a very distinguished honour had it not originated on such unimportant occasions. In fact also the statue of Attus Navius [c] stood in front of the senate-house—when the senate-house was set on fire at the funeral of Publius Clodius the base of the statue was burnt

338 B.C. 260 B.C. 439 B.C. 52 B.C.

fuit et Hermodori Ephesii in comitio, legum, quas decemviri scribebant, interpretis, publice dicata.
22 alia causa, alia auctoritas M. Horati Coclitis statuae—quae durat hodieque—, cum hostes a ponte sublicio solus arcuisset. equidem et Sibyllae iuxta rostra esse non miror, tres sint licet: una quam Sextus Pacuius Taurus aed. pl. restituit[1]; duae quas M. Messalla. primas putarem has et Atti Navi, positas aetate Tarquinii Prisci, ni regum anteceden-
23 tium essent in Capitolio, ex iis Romuli et Tatii sine tunica, sicut et Camilli in rostris. et ante aedem Castorum fuit Q. Marci Tremuli equestris togata, qui Samnites bis devicerat captaque Anagnia populum stipendio liberaverat. inter antiquissimas sunt et Tulli Cloeli, L. Rosci, Sp. Nauti,[2] C. Fulcini in rostris, a Fidenatibus in legatione interfectorum.
24 hoc a re p. tribui solebat iniuria caesis, sicut aliis et P. Iunio, Ti. Coruncanio, qui ab Teuta Illyriorum regina interfecti erant. non omittendum videtur, quod annales adnotavere, tripedaneas iis statuas in

[1] *V.l.* instituit.
[2] nautii *B*: Antii *Caesarius coll. Liv.* IV.17.

[a] *I.e.* Castor and Pollux: Suetonius records (*Div. Iul.*, 10) that it was dedicated to both, but usually spoken of as the Temple of Castor.

with it; and the statue of Hermodorus of Ephesus the interpreter of the laws drafted by the decemvirs, 451–450 B.C. dedicated at the public cost, stood in the Assembly-place of Rome. There was a different motive and another reason—an important one—for the statue of Marcus Horatius Cocles, which has survived even to 508 B.C. the present day; it was erected because he had single-handed barred the enemy's passage of the Bridge on Piles. Also, it does not at all surprise me that statues of the Sibyl stand near the Beaked Platform though there are three of them—one restored by Sextus Pacuvius Taurus, aedile of the plebs, and two by Marcus Messalla. I should think these statues and that of Attus Navius, all erected in the period of Tarquinius Priscus, were the first, (616–579 B.C.) if it were not for the statues on the Capitol of the kings who reigned before him, among them the figures of Romulus and Tatius without the tunic, as also that of Camillus on the Beaked Platform. Also there was in front of the temple of the Castors [a] an equestrian statue of Quintus Marcius Tremulus, wearing a toga; he had twice vanquished the Samnites, and by taking Anagni delivered the nation c. 305 B.C. from payment of war-tax. Among the very old statues are also those at the Platform of Tullus Cloelius, Lucius Roscius, Spurius Nautius, and Gaius Fulcinius, all assassinated by the people of Fidenae 438 B.C. when on an embassy to them. It was the custom for the state to confer this honour on those who had been wrongfully put to death, as among others Publius Junius and Titus Coruncanius, who had been killed by Teuta the Queen of the Illyrians. 230 B.C. It would seem not to be proper to omit the fact noted by the annals that the statues of these persons,

foro statutas; haec videlicet mensura honorata tunc erat. non praeteribo et Cn. Octavium ob unum SC.[1] verbum. hic regem Antiochum daturum se responsum dicentem virga, quam tenebat forte, circumscripsit priusque, quam egrederetur circulo illo, responsum dare coegit. in qua legatione interfecto senatus statuam poni iussit quam oculatissimo loco,
25 eaque est in rostris. invenitur statua decreta et Taraciae Gaiae sive Fufetiae virgini Vestali, ut poneretur ubi vellet, quod adiectum non minus honoris habet quam feminae esse decretam. meritum eius ipsis ponam annalium verbis: quod campum Tiberinum gratificata esset ea populo.

26 XII. Invenio et Pythagorae et Alcibiadi in cornibus comitii positas, cum bello Samniti Apollo Pythius iussisset fortissimo Graiae gentis et alteri sapientissimo simulacra celebri loco dicari. eae stetere, donec Sulla dictator ibi curiam faceret. mirumque est, illos patres Socrati cunctis ab eodem deo sapientia praelato Pythagoran praetulisse aut tot aliis virtute Alcibiaden et quemquam utroque[2] Themistocli.

[1] sc *B, cd. Leid. Voss.*: scilicet *rell.*
[2] utraque *coni. Mayhoff.*

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[a] This is a mistake. This act was performed by C. Popillius Laenas when Antiochus IV was on his 4th campaign against Egypt.

[b] In fact on an embassy to Syria connected with troubles on the accession of Antiochus V (not IV).

[c] *Oculatissimus* is the 'single word' to which Pliny alludes above, meaning 'most visible to the eye.'

[d] It was in fact an enlargement of the original Senate-house.

[e] The Athenian chiefly responsible for Athens' sea-power and the defeat of Xerxes by sea at Salamis in 480 B.C.

erected in the forum, were three feet in height, showing that this was the scale of these marks of honour in those days. I will not pass over the case of Gnaeus Octavius also, because of a single word that occurs in a Decree of the Senate. When King Antiochus IV said he intended to answer him, Octavius [a] with the stick he happened to be holding in his hand drew a line all round him and compelled him to give his answer before he stepped out of the 168 B.C.
circle. And as Octavius was killed while on this 162 B.C.
embassy,[b] the senate ordered a statue to be erected to him 'in the spot most eyed'[c] and that statue stands on the Platform. We also find that a decree was passed to erect a statue to a Vestal Virgin named Taracia Gaia or Fufetia 'to be placed where she wished,' an addition that is as great a compliment as the fact that a statue was decreed in honour of a woman. For the Vestal's services I will quote the actual words of the Annals: 'because she had made a gratuitous present to the nation of the field by the Tiber.'

Greek statues.

XII. I also find that statues were erected to Pythagoras and to Alcibiades, in the corners of the Place of Assembly, when during one of our Samnite Wars Pythian Apollo had commanded the erection 343 B.C.
in some conspicuous position of an effigy of the bravest man of the Greek race, and likewise, one of the wisest man; these remained until Sulla the dictator made[d] the Senate-house on the site. It 80 B.C.
is surprising that those illustrious senators of ours rated Pythagoras above Socrates, whom the same deity had put above all the rest of mankind in respect of wisdom, or rated Alcibiades above so many other men in manly virtue, or anybody above Themistocles[e] for wisdom and manly virtue combined.

27 Columnarum ratio erat attolli super ceteros mortales, quod et arcus significant novicio invento. primus tamen honos coepit a Graecis, nullique arbitror plures statuas dicatas quam Phalereo Demetrio Athenis, siquidem CCCLX statuere, nondum anno hunc numerum dierum excedente, quas mox laceravere. statuerunt et Romae in omnibus vicis tribus Mario Gratidiano, ut diximus, easdemque subvertere Sullae introitu.

28 XIII. Pedestres sine dubio Romae fuere in auctoritate longo tempore; et equestrium tamen origo perquam vetus est, cum feminis etiam honore communicato Cloeliae statua equestri, ceu parum esset toga eam cingi, cum Lucretiae ac Bruto, qui expulerant reges, propter quos Cloelia inter obsides
29 fuerat, non decernerentur. hanc primam cum Coclitis publice dicatam crediderim—Atto enim ac Sibyllae Tarquinium, ac reges sibi ipsos posuisse verisimile est—, nisi Cloeliae quoque Piso traderet ab iis positam, qui una opsides fuissent, redditis a Porsina [1] in honorem eius. e diverso Annius Fetialis

[1] porsina B^1: porsena *cd. Par.* 6801: porsenna *rell.*

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[a] An Attic orator and statesman who lived *c.* 345–282 B.C., and was exiled in 307 B.C. after a ten years' tyranny.

[b] The last king of Rome, Tarquinius Superbus, was supported against his republican enemies at Rome by Lars Porsena, the Tuscan king of Clusium, who invaded Rome and seized the Capitol, but withdrew after receiving twenty hostages. Among them was a maiden Cloelia, who escaped, swam across the Tiber and reached Rome. She was sent back to Porsena, but he was so struck with her gallantry that he set her free and allowed her to take back with her some of the other hostages. The rape of Lucretia by Sextus Tarquinius led to

The purport of placing statues of men on columns was to elevate them above all other mortals; which is also the meaning conveyed by the new invention of arches. Nevertheless the honour originally began with the Greeks, and I do not think that any person ever had more statues erected to him than Demetrius[a] of Phalerum had at Athens, inasmuch as they set up 360, at a period when the year did not yet exceed that number of days, statues however the Athenians soon shattered in pieces. At Rome also the tribes in all the districts set up statues to Marius Gratidianus, as we have stated, and likewise threw them down again at the entrance of Sulla.

Roman statues.

XXXIII. 132.

XIII. Statues of persons on foot undoubtedly held the field at Rome for a long time; equestrian statues also however are of considerable antiquity, and this distinction was actually extended to women with the equestrian statue of Cloelia, as if it were not enough for her to be clad in a toga, although statues were not voted to Lucretia and Brutus, who had driven out the kings owing to whom Cloelia had 510–509 B.C. been handed over with others as a hostage.[b] I should have held the view that her statue and that of Cocles were the first erected at the public expense— 508 B.C. for it is probable that the monuments to Attus and the Sibyl were erected by Tarquin and those of the § 22. kings by themselves—were it not for the statement of Piso that the statue of Cloelia also was erected by the persons who had been hostages with her, when they were given back by Porsena, as a mark of honour to her; whereas on the other hand Annius Fetialis states that an equestrian figure which once

the expulsion of the Tarquins by Brutus and his companions and the establishment of the republican government.

equestrem, quae fuerit contra Iovis Statoris aedem in vestibulo Superbi domus, Valeriae fuisse, Publicolae consulis filiae, eamque solam refugisse Tiberimque transnatavisse ceteris opsidibus, qui [1] Porsinae [2] mittebantur, interemptis Tarquinii insidiis.

30 XIV. L. Piso prodidit M. Aemilio C. Popilio iterum cos. a censoribus P. Cornelio Scipione M. Popilio statuas circa forum eorum, qui magistratum gesserant, sublatas omnes praeter eas, quae populi aut senatus sententia statutae essent, eam vero, quam apud aedem Telluris statuisset sibi Sp. Cassius, qui regnum adfectaverat, etiam conflatam a censoribus. nimirum in ea quoque re ambitionem provide-
31 bant illi viri. exstant Catonis in censura vociferationes mulieribus statuas Romanis [3] in provinciis poni; nec tamen potuit inhibere, quo minus Romae quoque ponerentur, sicuti Corneliae Gracchorum matri, quae fuit Africani prioris filia. sedens huic posita soleisque sine ammento insignis in Metelli publica porticu, quae statua nunc est in Octaviae operibus.

32 XV. Publice autem ab exteris posita est Romae C. Aelio tr. pl. lege perlata in Sthennium Stallium

[1] *V.l.* quae.
[2] porsinae *B*[1]: porsennae.
[3] statuas romanis *B*: romanis statuas *rell.* (r. in p. statuas *cd. Par.* 6801).

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[a] Public buildings in Rome erected by Augustus on the site of Metellus' colonnade built in 146 B.C. and named after his sister Octavia. The *basis* of Cornelia's statue survives.

stood opposite the temple of Jupiter Stator in the forecourt of Tarquinius Superbus's palace was the statue of Valeria, daughter of Publicola, the consul, and that she alone had escaped and had swum across the Tiber, the other hostages who were being sent to Porsena having been made away with by a stratagem of Tarquin.

XIV. Lucius Piso has recorded that, in the consulship of Marcus Aemilius and the second of 158 B.C.
Gaius Popilius, the censors Publius Cornelius Scipio and Marcus Popilius caused all the statues round the forum of men who had held office as magistrates to be removed excepting those that had been set up by a resolution of the people or the Senate, while the statue which Spurius Cassius, who had aspired to 485 B.C.
monarchy, had erected in his own honour before the temple of the Earth was actually melted down by censors: obviously the men of those days took precautions against ambition in the matter of statues also. Some declamatory utterances made by Cato during his censorship are extant protesting against 184 B.C.
the erection in the Roman provinces of statues to women; yet all the same he was powerless to prevent this being done at Rome also: for instance there is the statue of Cornelia the mother of the Gracchi and daughter of the elder Scipio Africanus. This represents her in a sitting position and is remarkable because there are no straps to the shoes; it stood in the public colonnade of Metellus, but is now in Octavia's Buildings.[a]

XV. The first statue publicly erected at Rome by foreigners was that in honour of the tribune of the people Gaius Aelius, for having introduced a law against Sthennius Stallius the Lucanian who had

Lucanum, qui Thurinos bis infestaverat. ob id Aelium Thurini statua et corona aurea donarunt. iidem postea Fabricium donavere statua liberati obsidione, passimque gentes[1] in clientelas ita[2] receptae, et adeo discrimen omne sublatum, ut Hannibalis etiam statuae tribus locis visantur in ea urbe, cuius intra muros solus hostium emisit hastam.

33 XVI. Fuisse autem statuariam artem familiarem Italiae quoque et vetustam, indicant Hercules ab Euandro sacratus, ut produnt, in foro boario, qui triumphalis vocatur atque per triumphos vestitur habitu triumphali, praeterea Ianus geminus a Numa rege dicatus, qui pacis bellique argumento colitur digitis ita figuratis, ut CCCLV[3] dierum nota[4] et aevi
34 esse deum indicent.[5] signa quoque Tuscanica per terras dispersa quin[6] in Etruria factitata sint,[7] non est dubium. deorum tantum putarem ea fuisse, ni Metrodorus Scepsius, cui cognomen a Romani nominis odio inditum est, propter MM statuarum Volsinios expugnatos obiceret. mirumque mihi

[1] gentes *cdd.*: clientes *Gelen*: statuae *edd. vett.*
[2] *V.l.* clientela sua: sunt *edd. vett.*
[3] CCCLV *edd. vett.*: CCCLXV.
[4] nota aut per significationem anni temporis *cdd.*: *seclud.* aut . . . temporis *Mayhoff.*
[5] indicent *B*: indicet *rell.*: indicaret *edd. vett.*
[6] quin *Detlefsen*: quae quin *Urlichs*: quae.
[7] sint *B*: *om. rell.*

[a] When he came up to the walls of Rome in 211 B.C. without attacking the city.

[b] Presumably three fingers of one hand made III, the first finger and thumb of that hand V, and the first finger and second finger of the other hand V, the thumb and the third and little finger of that hand being bent and not counting. The MSS. have 365 (which number was not valid until Caesar's

twice made an attack upon Thurii; for this the inhabitants of that place presented Aelius with a statue and a crown of gold. The same people afterwards presented Fabricius with a statue for having rescued them from a state of siege; and various races successively in some such way placed themselves under Roman patronage, and all discrimination was so completely abrogated that even a statue of Hannibal may be seen in three places in the city within the walls of which he alone of its national foes had hurled a spear.[a]

289, 285 B.C.

283 B.C.

Italian statues.

XVI. That the art of statuary was familiar to Italy also and of long standing there is indicated by the statue of Hercules in the Cattle Market said to have been dedicated by Evander, which is called 'Hercules Triumphant,' and on the occasion of triumphal processions is arrayed in triumphal vestments; and also by the two-faced Janus, dedicated by King Numa, which is worshipped as indicating war and peace, the fingers of the statue being so arranged as to indicate the 355 [b] days of the year, and to betoken that Janus is the god of the duration of time. Also there is no doubt that the so-called Tuscanic images scattered all over the world were regularly made in Etruria. I should have supposed these to have been statues of deities only, were it not that Metrodorus of Scepsis, who received his surname [c] from his hatred of the very name of Rome, reproached us with having taken by storm the city of Volsinii for the sake of the 2000 statues which it contained. And it seems to me surprising that

264 B.C.

time). In such a case the VI could be represented by the thumb and the first and second fingers of one hand.

[c] Misoromaeus, μισορωμαῖος, 'Roman-hater.'

videtur, cum statuarum origo tam vetus Italiae sit, lignea potius aut fictilia deorum simulacra in delubris dicata usque ad devictam Asiam, unde luxuria.

35 Similitudines exprimendi quae prima fuerit origo, in ea, quam plasticen Graeci vocant, dici convenientius erit; etenim prior quam statuaria fuit. sed haec ad infinitum effloruit, multorum voluminum opere, si quis plura persequi velit; omnia enim quis possit?

36 (XVII.) M. Scauri aedilitate signorum MMM in scaena tantum fuere temporario theatro. Mummius Achaia devicta replevit urbem, non relicturus filiae dotem; cur enim non cum excusatione ponatur? multa et Luculli invexere. Rhodi etiamnum $\overline{\text{III}}$[1] signorum esse Mucianus ter cos. prodidit, nec pauciora Athenis, Olympiae, Delphis superesse creduntur. quis ista
37 mortalium persequi possit aut quis usus noscendi intellegatur? insignia maxime et aliqua de causa notata voluptarium sit attigisse artificesque celebratos nominavisse, singulorum quoque inexplicabili multitudine, cum Lysippus MD opera fecisse prodatur, tantae omnia artis, ut claritatem possent dare vel singula: numerum apparuisse defuncto eo, cum

[1] $\overline{\text{III}}$ *Mayhoff*: tria milia *cd. Par.* 6801: $\overline{\text{LXXIII}}$ *aut* LXXIII *rell.*

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[a] See p. 110, notes.

[b] L. Licinius Lucullus, consul 74 B.C., and his brother M., consul 73 B.C.

although the initiation of statuary in Italy dates so far back, the images of the gods dedicated in the shrines should have been more usually of wood or terracotta right down to the conquest of Asia,[a] which introduced luxury here.

What was the first origin of representing likenesses in the round will be more suitably discussed when we are dealing with the art for which the Greek term is 'plasticē' *plastic*, as that was earlier than the art of bronze statuary. But the latter has flourished to an extent passing all limit and offers a subject that would occupy many volumes if one wanted to give a rather extensive account of it—for as for a completely exhaustive account, who could achieve that? (XVII.) In the aedileship of Marcus Scaurus there were 3000 statues on the stage in what was only a temporary theatre. Mummius after conquering Achaia filled the city with statues, though destined not to leave enough at his death to provide a dowry for his daughter—for why not mention this as well as the fact that excuses it? A great many were also imported by the Luculli.[b] Yet it is stated by Mucianus who was three times consul that there are still 3000 statues at Rhodes, and no smaller number are believed still to exist at Athens, Olympia and Delphi. What mortal man could recapitulate them all, or what value can be felt in such information? Still it may give pleasure just to allude to the most remarkable and to name the artists of celebrity, though it would be impossible to enumerate the total number of the works of each, inasmuch as Lysippus is said to have executed 1500 works of art, all of them so skilful that each of them by itself might have made him famous; the number

Popularity of the art of bronze statuary. XXXV. 151 *sqq.*

58 B.C.

146 B.C.

A.D. 52, 70. 75.

Lysippus. Latter part of 4th century B.C.

thesaurum effregisset heres; solitum enim ex manipretio cuiusque signi denarios seponere aureos singulos.

38 Evecta supra humanam fidem ars est successu, mox et audacia. in argumentum successus unum exemplum adferam, nec deorum hominumve similitudinis expressae. aetas nostra vidit in Capitolio, priusquam id novissime conflagraret a Vitellianis incensum, in cella Iunonis canem ex aere volnus suum lambentem, cuius eximium miraculum et indiscreta veri similitudo non eo solum intellegitur, quod ibi dicata fuerat, verum et satisdatione; nam quoniam summa nulla par videbatur, capite tutelarios
39 cavere pro ea institutum publice fuit. (XVIII.) audaciae innumera sunt exempla. moles quippe excogitatas videmus statuarum, quas colossaeas vocant, turribus pares. talis est in Capitolio Apollo, tralatus a M. Lucullo ex Apollonia Ponti urbe, XXX
40 cubitorum, D [1] talentis factus; talis in campo Martio Iuppiter, a [2] Claudio Caesare dicatus, qui devoratur Pompeiani theatri vicinitate; talis et Tarenti factus a Lysippo, XL cubitorum. mirum in eo quod manu, ut ferunt, mobilis ea ratio libramenti est, ut nullis convellatur procellis. id quidem providisse et artifex dicitur modico intervallo, unde maxime

[1] D *edd.*: L *Overbeck*: CL *edd. vett.* (*recte ?*).
[2] a *B, cd. Par.* 6801: aulo *rell.*: a divo *Gronov.*

[a] No doubt a στατήρ.
[b] This figure seems too large.
[c] Lit. 'is swallowed up by.'

is said to have been discovered after his decease, when his heir broke open his coffers, it having been his practice to put aside a coin [a] of the value of one gold denarius out of what he got as reward for his handicraft for each statue.

The art rose to incredible heights in success and afterwards in boldness of design. To prove its success I will adduce one instance, and that not of a representation of either a god or a man: our own generation saw on the Capitol, before it last went up A.D. 69. in flames burnt at the hands of the adherents of Vitellius, in the shrine of Juno, a bronze figure of a hound licking its wound, the miraculous excellence and absolute truth to life of which is shown not only by the fact of its dedication in that place but also by the method taken for insuring it; for as no sum of money seemed to equal its value, the government enacted that its custodians should be answerable for its safety with their lives. (XVIII.) Of boldness of design the examples are innumerable. We see enormously huge statues devised, what are called *Colossal statues.* Colossi, as large as towers. Such is the Apollo on the Capitol, brought over by Marcus Lucullus from 73 B.C. Apollonia, a city of Pontus, 45 ft. high, which cost 500 [b] talents to make; or the Jupiter which the Emperor Claudius dedicated in the Campus Martius, which is dwarfed [c] by the proximity of the theatre of Pompey; or the 60 ft. high statue at Taranto made by Lysippus. The remarkable thing in the case of the last is that though it can be moved by the hand, it is so nicely balanced, so it is said, that it is not dislodged from its place by any storms. This indeed, it is said, the artist himself provided against by erecting a column a short distance from

flatum opus erat frangi, opposita columna. itaque magnitudinem propter difficultatemque moliendi[1] non attigit eum Fabius Verrucosus, cum Herculem,
41 qui est in Capitolio, inde transferret. ante omnes autem in admiratione fuit Solis colossus Rhodi, quem fecerat Chares Lindius, Lysippi supra dicti discipulus. LXX cubitorum altitudinis fuit hoc simulacrum, post LXVI[2] annum terrae motu prostratum, sed iacens quoque miraculo est. pauci pollicem eius amplectuntur, maiores sunt digiti quam pleraeque statuae. vasti specus hiant defractis membris; spectantur intus magnae molis saxa, quorum pondere stabiliverat eum constituens. duodecim annis tradunt effectum CCC talentis, quae contigerant ex apparatu regis Demetrii relicto morae taedio
42 obsessa[3] Rhodo. sunt alii centum numero in eadem urbe colossi minores hoc, sed ubicumque singuli fuissent, nobilitaturi locum, praeterque hos deorum quinque, quos fecit Bryaxis.

43 Factitavit colossos et Italia. videmus certe Tuscanicum Apollinem in bibliotheca templi Augusti quinquaginta pedum a pollice, dubium aere mirabiliorem an pulchritudine. fecit et Sp. Carvilius Iovem, qui est in Capitolio, victis Samnitibus sacrata

[1] movendi *B*[2].
[2] LXVI *B*[1]: LVI.
[3] obsessa *B*: obesse a *rell.* (obsesso *cd. Vind.*): obsessae *Sillig*: *del. edd. vett.* (*item* rhodo).

[a] Demetrius Poliorcetes. [b] Cf. § 34.

it to shelter it on the side where it was most necessary to break the force of the wind. Accordingly, because of its size, and the difficulty of moving it with great labour, Fabius Verrucosus left it alone when he transferred the Heracles from that place to the Capitol where it now stands. But calling for admiration before all others was the colossal Statue of the Sun at Rhodes made by Chares of Lindus, the pupil of Lysippus mentioned above. This statue was 105 ft. high; and, 66 years after its erection, was overthrown by an earthquake, but even lying on the ground it is a marvel. Few people can make their arms meet round the thumb of the figure, and the fingers are larger than most statues; and where the limbs have been broken off enormous cavities yawn, while inside are seen great masses of rock with the weight of which the artist steadied it when he erected it. It is recorded that it took twelve years to complete and cost 300 talents, money realized from the engines of war belonging to King Demetrius[a] which he had abandoned when he got tired of the protracted siege of Rhodes. There are a hundred other colossal statues in the same city, which though smaller than this one would have each of them brought fame to any place where it might have stood alone; and besides these there were five colossal statues of gods, made by Bryaxis.

209 B.C.

Chares. Colossal statue at Rhodes.

c. 226 B.C.

305–4 B.C.

Italy also was fond of making colossal statues. At all events we see the Tuscanic[b] Apollo in the library of the Temple of Augustus, 50 ft. in height measuring from the toe; and it is a question whether it is more remarkable for the quality of the bronze or for the beauty of the work. Spurius Carvilius also made the Jupiter that stands in the Capitol,

Other colossal statues.

lege pugnantibus e pectoralibus eorum ocreisque et galeis. amplitudo tanta est, ut conspiciatur a Latiari Iove. e reliquiis limae suam statuam
44 fecit, quae est ante pedes simulacri eius. habent in eodem Capitolio admirationem et capita duo, quae P. Lentulus cos. dicavit, alterum a Charete supra dicto factum, alterum fecit . . . dicus[1] comparatione in tantum victus, ut artificum[2] minime pro-
45 babilis videatur. verum omnem amplitudinem statuarum eius generis vicit aetate nostra Zenodorus Mercurio facto in civitate Galliae Arvernis per annos decem, HS |CCCC|[3] manipretii, postquam satis artem ibi adprobaverat, Romam accitus a Nerone, ubi destinatum illius principis simulacro[4] colossum fecit CVIS[5] pedum in[6] longitudinem, qui dicatus Soli[7] venerationi est damnatis sceleribus illius
46 principis. mirabamur in officina non modo ex argilla similitudinem insignem, verum et de parvis admodum surculis[8] quod primum operis instaurati fuit. ea statua indicavit interisse fundendi aeris scientiam, cum et Nero largiri aurum argentumque paratus esset et Zenodorus scientia fingendi cae-
47 landique nulli veterum postponeretur. statuam Ar-

[1] Prodicus *coni. Sillig*: Pythodicus *Urlichs coll.* § 85.
[2] *V.l.* artificium.
[3] |CCCC| *Ian*: CCCC.
[4] simulacro *B*: simulacrum *rell.*
[5] CVIS *Detlefsen*: CXIX *Ian*: CXIXS *Urlichs*: cui nonaginta (= CVIXC) *B*: cui X *aut alia rell.*
[6] in *add. Mayhoff.*
[7] soli *B*: solis *rell.*
[8] sublicis *coni. Warmington.*

[a] On the Alban Mount, ten miles from Rome.
[b] Only the last five letters of the name survive in MSS. Another conjectured restoration is Pythodicus, cf. § 85.

after defeating the Samnites in the war which they 293 B.C. fought under a most solemn oath; the metal was obtained from their breastplates, greaves and helmets, and the size of the figure is so great that it can be seen from the temple of Jupiter Latiaris.[a] Out of the bronze filings left over Carvilius made the statue of himself that stands at the feet of the statue of Jupiter. The Capitol also contains two much admired heads dedicated by the consul Publius 57 B.C. Lentulus, one made by Chares above-mentioned and the other by Prodicus,[b] who is so outdone by comparison as to seem the poorest of artists. But all the gigantic statues of this class have been beaten in our period by Zenodorus with the Hermes or *Zenodorus.* Mercury which he made in the community of the Arverni in Gaul; it took him ten years and the sum paid for its making was 40,000,000 sesterces. Having given sufficient proof of his artistic skill in Gaul he was summoned to Rome by Nero, and there made the A.D. 54-68. colossal statue, 106½ ft. high, intended to represent that emperor but now, dedicated to the sun after the condemnation of that emperor's crimes, it is an object of awe. In his studio we used not only to admire the remarkable likeness of the clay model but also to marvel at the frame of quite small timbers [c] which constituted the first stage of the work put in hand. This statue has shown that skill in bronze-founding has perished, since Nero was quite ready to provide gold and silver, and also Zenodorus was counted inferior to none of the artists of old in his knowledge of modelling and chasing. When he

[c] A skeleton for the model; or, according to Eugénie Sellers, slender wax tubes covering a wax model, which was then cased in loam before bronze was poured in.

vernorum cum faceret provinciae Dubio[1] Avito praesidente, duo pocula Calamidis manu caelata, quae Cassio Salano avunculo eius, praeceptori suo, Germanicus Caesar adamata donaverat, aemulatus est, ut vix ulla differentia esset artis. quanto maior Zenodoro praestantia fuit, tanto magis deprehenditur aeris obliteratio.

48 Signis, quae vocant Corinthia, plerique in tantum capiuntur, ut secum circumferant, sicut Hortensius orator sphingem Verri reo ablatam, propter quam Cicero illo iudicio in altercatione neganti ei, aenigmata se intellegere, respondit debere, quoniam sphingem domi haberet. circumtulit et Nero princeps Amazonem, de qua dicemus, et paulo ante C. Cestius consularis[2] signum,[3] quod secum etiam in proelio habuit. Alexandri quoque Magni tabernaculum sustinere traduntur solitae statuae, ex quibus duae ante Martis Ultoris aedem dicatae sunt, totidem ante regiam.

49 XIX. Minoribus simulacris signisque innumera prope artificum multitudo nobilitata est, ante omnes tamen Phidias Atheniensis Iove Olympio[4] facto ex ebore quidem et auro, sed et ex aere signa fecit.

[1] Vibio *cd. Par.* 6801: Duuio *J. Klein.*
[2] consularis Laris *Fröhner.*
[3] sphingem *coni. Mayhoff*: *seclud. Urlichs.*
[4] Olympio *B*: Olympiae *rell.*

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[a] The reference is probably to statuettes, not medallions or signet rings or brooches.

[b] Apparently Pliny has made a mistake, because Alexander's σκηνή was the canopy (supported by four golden statues of Victory) of the chariot which carried Alexander's dead body to Alexandria.

[c] In the forum of Augustus at Rome.

[d] Near the temple of Vesta.

was making the statue for the Arverni, when the governor of the province was Dubius Avitus, he produced facsimiles of two chased cups, the handiwork of Calamis, which Germanicus Caesar had prized highly and had presented to his tutor Cassius Salanus, Avitus's uncle; the copies were so skilfully made that there was scarcely any difference in artistry between them and the originals. The greater was the eminence of Zenodorus, the more we realize how the art of working bronze has deteriorated.

Figurines. Owners of the figurines [a] called Corinthian are usually so enamoured of them that they carry them about with them; for instance the orator Hortensius was never parted from the sphinx which he had got out of Verres when on trial; this explains Cicero's 70 B.C. retort when Hortensius in the course of an altercation at the trial in question said he was not good at riddles. 'You ought to be,' said Cicero, 'as you keep a sphinx in your pocket.' The emperor Nero also A.D. 54–68. used to carry about with him an Amazon which we shall describe later, and a little before Nero, the § 82. ex-consul Gaius Cestius used to go about with a figurine, which he had with him even on the battlefield. It is also said that the tent [b] of Alexander the Great was regularly erected with four statues as tent-poles, two of which have now been dedicated to stand in front of the temple [c] of Mars the Avenger and two in front of the Royal Palace.[d]

Small statues. Famous Greek statuaries. XIX. An almost innumerable multitude of artists have been rendered famous by statues and figures of smaller size; but before them all stands the Athenian Pheidias, celebrated for the statue of Olympian Zeus, which in fact was made of ivory and gold, although he also made figures of bronze. He *Born c. 500 B.C. c. 450 B.C.*

floruit autem olympiade LXXXIII, circiter CCC urbis nostrae annum,[1] quo eodem tempore aemuli eius fuere Alcamenes, Critias, Nesiotes, Hegias, et deinde olympiade LXXXVII Hagelades, Callon, Gorgias Lacon; rursus LXXXX Polyclitus, Phradmon, Myron, Pytha-
50 goras, Scopas, Perellus.[2] ex iis Polyclitus discipulos habuit Argium, Asopodorum, Alexim, Aristidem, Phrynonem, Dinonem,[3] Athenodorum, Demean Clitorium, Myron Lycium. LXXXXV olympiade floruere Naucydes, Dinomenes, Canachus, Patroclus; CII Polycles, Cephisodotus, Leochares,[4] Hypatodorus;[5] CIIII Praxiteles, Euphranor; CVII Aetion, Theri-
51 machus. CXIII Lysippus fuit, cum et Alexander Magnus, item Lysistratus frater eius, Sthennis,[6] Euphron, Sofocles,[7] Sostratus, Ion, Silanion—in hoc mirabile quod nullo doctore nobilis fuit; ipse discipulum habuit Zeuxiaden—; CXXI Eutychides, Euthycrates, Laippus,[8] Cephisodotus,[9] Timarchus, Pyro-
52 machus.[10] cessavit deinde ars ac rursus olympiade CLVI revixit, cum fuere longe quidem infra praedictos,

[1] *V.l.* anno.
[2] Perellus *B*: Perelius *rell.*: Perileus *Thiersch.*
[3] *om. B.*
[4] Leochares *Hermolaus Barbarus* (cf. § 79): leuchares *B*: leuihares *aut sim. rell.*
[5] Epatodorus *Hermolaus Barbarus.*
[6] Sthennis *Hermolaus Barbarus*: thenis.
[7] Euphron, Sofocles *Loewy*: E., Eucles *Ian*: euphron fucles *B*: euphronicles *aut* -ides *rell.*
[8] Dahippus *Hardouin.*
[9] Cephisodorus *Gelen.*
[10] Phyromachus *Keil.*

[a] More exactly the 306th to the 309th year of the city of Rome = 448–445 B.C.
[b] In merit. For Critias the *Marmor Parium* has Critios.

flourished in the 83rd Olympiad, about [a] the 300th year of our city, at which same period his rivals [b] were Alcamenes, Critias, Nesiotes and Hegias; and later, in the 87th Olympiad there were Hagelades,[c] Callon and the Spartan Gorgias, and again in the 90th Olympiad Polycleitus, Phradmon, Myron, Pythagoras,[d] Scopas [e] and Perellus. Of these Polycleitus had as pupils Argius, Asopodorus, Alexis, Aristides, Phryno, Dino, Athenodorus, and Demeas of Clitor; and Myron had Lycius. In the 95th Olympiad flourished Naucydes, Dinomenes, Canachus and Patroclus; and in the 102nd Polycles, Cephisodotus, Leochares and Hypatodorus; in the 104th Praxiteles and Euphranor; in the 107th Aetion and Therimachus. Lysippus [f] was in the 113th, the period of Alexander the Great, and likewise his brother Lysistratus, Sthennis, Euphron, Sophocles, Sostratus, Ion and Silanion—a remarkable fact in the case of the last named being that he became famous without having had any teacher; he himself had Zeuxiades as his pupil—and in the 121st Eutychides, Euthycrates, Laippus,[g] Cephisodotus, Timarchus and Pyromachus. After that the art languished, and it revived again in the 156th Olympiad, when there were the following, far inferior it is true to those mentioned above, but

448–445 B.C. 454 B.C. 432–429 B.C. 420–417 B.C. 400–397 B.C. 372–369 B.C. 364–361 B.C. 352–349 B.C. 327–324 B.C. 295–292 B.C. 156–153 B.C.

[c] The Greek form is Hagelaidas. He really flourished c. 515–485 B.C.

[d] In fact Myron's best work was done before 450 B.C., Pythagoras' before 475 B.C.

[e] In fact Scopas was still working in 350 B.C. unless we have here an elder Scopas.

[f] He was apparently working soon after 369 B.C.

[g] Probably this should be Daippus as in § 87, cf. Paus. VI. 12, 6; 16, 35, Δάιππος.

probati tamen, Antaeus,[1] Callistratus, Polycles Athenaeus, Callixenus, Pythocles, Pythias, Timocles.

53 Ita distinctis celeberrimorum aetatibus insignes raptim transcurram, reliqua multitudine passim dispersa. venere autem et in certamen laudatissimi, quamquam diversis aetatibus geniti, quoniam fecerant Amazonas, quae cum in templo Dianae Ephesiae dicarentur, placuit eligi probatissimam ipsorum artificum, qui praesentes erant, iudicio, cum[2] apparuit eam esse, quam omnes secundam a sua quisque iudicassent. haec est Polycliti, proxima ab ea Phidiae, tertia Cresilae,[3] quarta Cydonis, quinta Phradmonis.

54 Phidias praeter Iovem Olympium, quem nemo aemulatur, fecit ex ebore auroque[4] Minervam Athenis, quae est in Parthenone stans, ex aere vero praeter Amazonem supra dictam Minervam tam eximiae pulchritudinis, ut formae cognomen acceperit. fecit et cliduchum et aliam Minervam, quam Romae Paulus Aemilius ad aedem Fortunae Huiusce Diei dicavit, item duo signa, quae Catulus in eadem aede, palliata et alterum colossicon nudum, primusque artem toreuticen aperuisse atque demonstrasse merito iudicatur.

[1] Antheus *edd. vett.*
[2] tum *O. Jahn.*
[3] clesilae *B*: Ctesilae *Gelen*: Ctesilai *Hardouin.*
[4] auroque *coni. Mayhoff*: aeque.

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[a] Some blunder has produced a new artist out of the name Cydonia, Cresilas's birthplace.

[b] Perhaps Callimorphos, 'fair of form.'

[c] A priestess probably, but possibly Persephone.

nevertheless artists of repute: Antaeus, Callistratus, Polycles of Athens, Callixenus, Pythocles, Pythias and Timocles.

After thus defining the periods of the most famous artists, I will hastily run through those of outstanding distinction, throwing in the rest of the throng here and there under various heads. The most celebrated have also come into competition with each other, although born at different periods, because they had made statues of Amazons; when these were dedicated in the Temple of Artemis of Ephesus, it was agreed that the best one should be selected by the vote of the artists themselves who were present; and it then became evident that the best was the one which all the artists judged to be the next best after their own: this is the Amazon by Polycleitus, while next to it came that of Pheidias, third Cresilas's, fourth Cydon's [a] and fifth Phradmon's.

Pheidias, besides the Olympian Zeus, which *Pheidias.* nobody has ever rivalled, executed in ivory and gold § 49. the statue of Athene that stands erect in the Parthenon at Athens, and in bronze, besides the Amazon mentioned above, an Athene of such exquisite beauty that it has been surnamed the Fair.[b] He also made the Lady [c] with the Keys, and another Athene which Aemilius Paulus dedicated in Rome 167 B.C.? at the temple of Today's Fortune, and likewise a work consisting of two statues wearing cloaks which Catulus erected in the same temple, and another 101 B.C. work, a colossal statue undraped; and Pheidias is deservedly deemed to have first revealed the capabilities and indicated the methods of statuary.[d]

[d] Here perhaps all statuary as contrasted with painting; or else all metal-work only.

55 Polyclitus Sicyonius, Hageladae discipulus, diadumenum fecit molliter iuvenem, centum talentis nobilitatum, idem et doryphorum viriliter puerum. fecit et [1] quem canona artifices vocant liniamenta artis ex eo petentes veluti a lege quadam, solusque hominum artem ipsam fecisse artis opere iudicatur. fecit et destringentem se et nudum telo [2] incessentem duosque pueros item nudos, talis ludentes, qui vocantur astragalizontes et sunt in Titi imperatoris atrio—quo [3] opere nullum absolutius plerique iudicant;—item Mercurium qui fuit Lysimacheae,
56 Herculem, qui Romae, hagetera [4] arma sumentem, Artemona, qui periphoretos appellatus est. hic consummasse hanc scientiam iudicatur et toreuticen sic erudisse, ut Phidias aperuisse. proprium eius est, uno crure ut insisterent signa, excogitasse, quadrata tamen esse ea ait Varro et paene ad exemplum.
57 Myronem Eleutheris natum, Hageladae et ipsum discipulum, bucula maxime nobilitavit celebratis

[1] *del.* et *Urlichs puncto post* puerum *sublato.*
[2] telo *Benndorf*: talo.
[3] quo *cd. Par.* 6801: hoc *Ian*: duo. hoc *B*: *om. rell.*
[4] hagetera *B*: agetera *rell.*: alexetera *Hardouin*: Anteum e terra (*om.* arma) *ed. vett.*

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[a] Of Argos, says Plato (*Protag.* 311e). But his family moved to Sicyon. He cannot however have been a pupil of Hagelades (§ 49). Copies of Polycleitus' *Diadumenos* and of his *Doryphoros* are extant. Pliny confuses the great Polycleitus with P. the younger, likewise of Argos, who lived in the 4th century B.C.

[b] We know however that this ' model statue ' or ' standard ' was the *Doryphoros* just mentioned.

[c] Or, ' in a single work embodied the principles of his art.' P. wrote a treatise on art, called it Κανών, then made his

Polycleitus of Sicyon,[a] pupil of Hagelades, made a statue of the 'Diadumenos' or Binding his Hair—a youth, but soft-looking—famous for having cost 100 talents, and also the 'Doryphoros' or Carrying a Spear—a boy, but manly-looking. He also made what artists call a 'Canon' or Model Statue,[b] as they draw their artistic outlines from it as from a sort of standard; and he alone of mankind is deemed by means of one work of art to have created the art itself.[c] He also made the statue of the Man using a Body-scraper ('Apoxyomenos') and, in the nude, the Man Attacking with Spear, and the Two Boys Playing Dice, likewise in the nude, known by the Greek name of *Astragalizontes* and now standing in the fore-court of the Emperor Titus— this is generally considered to be the most perfect work of art in existence—and likewise the Hermes that was once at Lysimachea; Heracles; the Leader Donning his Armour, which is at Rome; and Artemon,[d] called the Man in the Litter. Polycleitus is deemed to have perfected this science of statuary and to have refined the art of carving sculpture, just as Pheidias is considered to have revealed it. A discovery that was entirely his own is the art of making statues throwing their weight on one leg, although Varro says these figures are of a square build and almost all made on one model. *Polycleitus* A.D. 79–81.

Myron, who was born at Eleutherae, was himself also a pupil of Hagelades; he was specially famous for his statue of a heifer, celebrated in some well- *Myron.* c. 477 B.C.

Doryphoros on his own principles, and called the sculptured work also Κανών.

[d] A famous voluptuary (not the engineer of Pericles' time).

versibus laudata, quando alieno plerique ingenio magis quam suo commendantur. fecit et Ladam[1] et discobolon et Perseum et pristas[2] et Satyrum admirantem tibias et Minervam, Delphicos pentathlos, pancratiastas, Herculem, qui est apud circum maximum in aede Pompei Magni. fecisse et cicadae monumentum ac locustae carminibus suis
58 Erinna significat. fecit et Apollinem, quem ab triumviro Antonio sublatum restituit Ephesiis divus Augustus admonitus in quiete. primus hic multiplicasse veritatem videtur, numerosior in arte quam Polyclitus et in[3] symmetria diligentior, et ipse tamen corporum tenus curiosus animi sensus non expressisse, capillum quoque et pubem non emendatius fecisse, quam rudis antiquitas instituisset.

59 Vicit eum Pythagoras Reginus ex Italia pancratiaste Delphis posito; eodem vicit et Leontiscum. fecit et stadiodromon Astylon, qui Olympiae ostenditur, et Libyn[4] puerum tenentem tabellam[5] eodem loco, et mala ferentem nudum, Syracusis autem claudicantem, cuius ulceris dolorem sentire etiam spectantes

[1] Ladam *Benndorf*: canem. [2] pyctas *Löschke*.
[3] et in *cdd.*: *del.* et *Sillig*.
[4] Libyn *Hermolaus Barbarus*: lybin *B*: lipin *aut* lympin *aut* iolpum *rell.* [5] tabellam *B*: tabellas *rell.*

[a] Ladas was a famous runner. But the MSS. give *canem*, 'dog.' Copies of Myron's *Discobolos* are extant.
[b] It is possible that Pliny wrote 'the Boxers.'
[c] Probably a group of Marsyas and Athene, of which copies exist.
[d] Experts in both boxing and wrestling.
[e] This absurd statement is caused by a confusion of Μυρών and a girl Μυρώ (*Anth. Pal.* VII. 190—Myro makes a tomb for her pet insect).
[f] For another interpretation see E. Gardner, *Classical Review*, II. 69. [g] Leontiscos was an athlete, not an artist.

known sets of verses—inasmuch as most men owe their reputation more to someone else's talent than to their own. His other works include Ladas [a] and a 'Discobolos' or Man Throwing a Discus, and Perseus, and The Sawyers,[b] and The Satyr Marvelling at the Flute and Athene,[c] Competitors in the Five Bouts at Delphi, the All-round Fighters,[d] the Heracles now in the house of Pompey the Great at the Circus Maximus. Erinna [e] in her poems indicates that he even made a memorial statue of a tree-cricket and a locust. He also made an Apollo which was taken from the people of Ephesus by Antonius the Triumvir but restored to them by his late lamented Majesty Augustus in obedience to a warning given him in a dream. Myron is the first sculptor who appears to have enlarged the scope of realism, being more prolific in his art than Polycleitus and being more careful in his proportions.[f] Yet he himself so far as surface configuration goes attained great finish, but he does not seem to have given expression to the feelings of the mind, and moreover he has not treated the hair and the pubes with any more accuracy than had been achieved by the rude work of olden days.

Pythagoras of Rhegium

Myron was defeated by the Italian Pythagoras of Reggio with his All-round Fighter which stands at Delphi, with which he also defeated Leontiscus [g]; Pythagoras also did the runner Astylos which is on show at Olympia; and, in the same place, the Libyan [h] as a boy holding a tablet; and the nude Man Holding Apples, while at Syracuse there is his Lame Man, which actually makes people looking at it feel a pain from his ulcer in their own leg, and

[h] Mnaseas of Cyrene. Paus. VI. 13, 7; 18, 1.

videntur, item Apollinem serpentemque eius sagittis configi,[1] citharoedum, qui Dicaeus appellatus est, quod, cum Thebae ab Alexandro caperentur, aurum a fugiente conditum sinu eius celatum esset. hic primus nervos et venas expressit capillumque diligentius.

60 Fuit et alius Pythagoras Samius, initio pictor, cuius signa ad aedem Fortunae Huiusce Diei septem nuda et senis unum laudata sunt. hic supra dicto facie quoque indiscreta similis fuisse traditur, Regini autem discipulus et filius sororis fuisse Sostratus.

61 Lysippum Sicyonium Duris negat ullius fuisse discipulum, sed primo aerarium fabrum audendi rationem cepisse pictoris Eupompi responso. eum enim interrogatum, quem sequeretur antecedentium, dixisse monstrata hominum multitudine, naturam
62 ipsam imitandam esse, non artificem. plurima ex omnibus signa fecit, ut diximus, fecundissimae artis, inter quae destringentem se, quem M. Agrippa ante Thermas suas dicavit, mire gratum Tiberio principi. non quivit temperare sibi in eo, quamquam imperiosus sui inter initia principatus, transtulitque in cubiculum alio signo substituto, cum quidem tanta pop. R.

[1] configi *Ian*: configit *B*: confici *rell.*

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[a] Named Cleon, a Theban poet. Athenae. I. 19b.

[b] *I.e.* the statue afterwards restored the deposit entrusted to it.

[c] It is now known that he was the same as P. of Reggio. Paus. VI. 4, 3–4 shows that P. of Reggio was the sculptor of the statue of Euthynos; but we have the basis of that statue, whereon P. signs himself as 'Samian.' He must therefore have migrated to Reggio.

[d] 'Apoxyomenos.' The example in the Vatican is probably by a 3rd century artist.

also Apollo shooting the Python with his Arrows, a Man [a] playing the Harp, that has the Greek name of The Honest Man [b] given it because when Alexander took Thebes a fugitive successfully hid 335 B.C. in its bosom a sum of gold. Pythagoras of Reggio was the first sculptor to show the sinews and veins, and to represent the hair more carefully.

Pythagoras of Samos. There was also another [c] Pythagoras, a Samian, who began as a painter; his seven nude statues now at the temple of To-day's Fortune and one of an old man are highly spoken of. He is recorded to have resembled the above mentioned Pythagoras so closely that even their features were indistinguishable; but we are told that Sostratus was a pupil of Pythagoras of Reggio and a son of this Pythagoras' sister.

Lysippus. Lysippus of Sicyon is said by Duris not to have been the pupil of anybody, but to have been originally a copper-smith and to have first got the idea of venturing on sculpture from the reply given by the painter Eupompus when asked which of his predecessors he took for his model; he pointed to a crowd of people and said that it was Nature herself, not an artist, whom one ought to imitate. Lysippus as we have said was a most prolific artist and made more § 37 statues than any other sculptor, among them the Man using a Body-scraper [d] which Marcus Agrippa gave to be set up in front of his Warm Baths and of which the emperor Tiberius was remarkably fond. A.D. 14–37. Tiberius, although at the beginning of his principate he kept some control of himself, in this case could not resist the temptation, and had the statue removed to his bedchamber, putting another one in its place at the baths; but the public were so

contumacia fuit, ut theatri clamoribus reponi apoxyomenon flagitaverit princepsque, quamquam adamatum, reposuerit.
63 nobilitatur Lysippus et temulenta tibicina et canibus ac venatione, in primis vero quadriga cum Sole Rhodiorum. fecit et Alexandrum Magnum multis operibus, a pueritia eius orsus, quam statuam inaurari iussit Nero princeps delectatus admodum illa; dein, cum pretio perisset gratia artis, detractum est aurum, pretiosiorque talis existimabatur[1] etiam cicatricibus operis atque concisuris,
64 in quibus aurum haeserat,[2] remanentibus. idem fecit Hephaestionem, Alexandri Magni amicum, quem quidam Polyclito adscribant, cum is centum prope annis ante fuerit; item Alexandri venationem, quae Delphis sacrata est, Athenis Satyrum, turmam Alexandri, in qua amicorum eius imagines summa omnium similitudine expressit; hanc Metellus Macedonia subacta transtulit Romam. fecit et
65 quadrigas multorum generum. statuariae arti plurimum traditur contulisse, capillum exprimendo, capita minora faciendo quam antiqui, corpora graciliora siccioraque, per quae proceritas signorum maior videretur. non habet Latinum nomen sym-

[1] *V.l.* existimatur.
[2] fuerat *B*: haeserat *rell.*

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[a] With the head encircled with rays.
[b] This would be right, perhaps, if they meant the younger P., unknown to Pliny.
[c] Twenty-five officers who fell in the Battle of the Granicus. Vellei. Paterc., I. 11, 3.

obstinately opposed to this that they raised an outcry at the theatre, shouting "Give us back the '*Apoxyomenos*'"—Man using a Body-scraper—and the Emperor, although he had fallen quite in love with the statue, had to restore it. Lysippus is also famous for his Tipsy Girl playing the Flute, and his Hounds and Huntsmen in Pursuit of Game, but most of all for his Chariot with the Sun belonging to Rhodes.[a] He also executed a series of statues of Alexander the Great, beginning with one in 356–323 B.C.
Alexander's boyhood. The emperor Nero was so A.D. 54–68.
delighted by this statue of the young Alexander that he ordered it to be gilt; but this addition to its money value so diminished its artistic attraction that afterwards the gold was removed, and in that condition the statue was considered yet more valuable, even though still retaining scars from the work done on it and incisions in which the gold had been fastened. The same sculptor did Alexander the Great's friend Hephaestio, a statue which some people ascribe to Polycleitus,[b] although his date is about a hundred years earlier; and also Alexander's Hunt, dedicated at Delphi, a Satyr now at Athens, and Alexander's Squadron of Horse, in which the sculptor introduced portraits of Alexander's friends[c] consummately lifelike in every case. After the conquest of Macedonia this was removed to Rome by 148 B.C.
Metellus; he also executed Four-horse Chariots of various kinds. Lysippus is said to have contributed greatly to the art of bronze statuary by representing the details of the hair and by making his heads smaller than the old sculptors used to do, and his bodies more slender and firm, to give his statues the appearance of greater height. He scrupulously

metria, quam diligentissime custodiit[1] nova intactaque ratione quadratas veterum staturas permutando, vulgoque dicebat ab illis factos quales essent homines, a se quales viderentur esse. propriae huius videntur esse argutiae operum custoditae in minimis quoque rebus.

66 Filios et discipulos reliquit laudatos artifices Laippum,[2] Boëdan, sed ante omnes Euthycraten, quamquam is constantiam potius imitatus patris quam elegantiam austero maluit genere quam iucundo placere. itaque optume expressit Herculem Delphis et Alexandrum Thespiis venatorem et Thespiadas,[3] proelium equestre, simulacrum ipsum Trophoni ad oraculum, quadrigas complures, equum[4]

67 cum fiscinis,[5] canes venantium. huius porro discipulus fuit Tisicrates, et ipse Sicyonius, sed Lysippi sectae propior, ut vix discernantur complura signa, ceu senex Thebanus et Demetrius rex, Peucestes, Alexandri Magni servator, dignus tanta gloria.

68 Artifices, qui compositis voluminibus condidere haec, miris laudibus celebrant Telephanen Pho-

[1] custodiit *Mayhoff*: custodit *aut* custodivit *cdd.*

[2] Dahippum *Hardouin.*

[3] et Thespiadas *cd. Par. Lat.* 6797: *om.* thespiadas *B*: *om.* et *cd. Leid. Voss., cd. Flor. Ricc.*: et thespiadum *cd. Par.* 6801.

[4] equitem *coni. T. B. L. Webster.* [5] fiscinis *B*: fuscinis *rell.*

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[a] See note on Laippus in § 51.

[b] Or 'his Heracles made for Delphi, and his Alexander Hunting, and his Thespiades (these two made for Thespiae).' The Thespiades were the Muses.

[c] All MSS. except one give *fuscinis*, 'with Two-pronged Spears.'

preserved the quality of 'symmetry' (for which there is no word in Latin) by the new and hitherto untried method of modifying the squareness of the figure of the old sculptors, and he used commonly to say that whereas his predecessors had made men as they really were, he made them as they appeared to be. A peculiarity of this sculptor's work seems to be the minute finish maintained in even the smallest details.

Lysippus left three sons who were his pupils, the celebrated artists Laippus,[a] Boëdas and Euthycrates, the last pre-eminent, although he copied the harmony rather than the elegance of his father, preferring to win favour in the severely correct more than in the agreeable style. Accordingly his Heracles, at Delphi, and his Alexander Hunting, at Thespiae, his group of Thespiades,[b] and his Cavalry in Action are works of extreme finish, and so are his statue of Trophonius at the oracular shrine of that deity, a number of Four-horse Chariots, a Horse with Baskets [c] and a Pack of Hounds. Moreover Tisicrates, another native of Sicyon, was a pupil of Euthycrates, but closer to the school of Lysippus—indeed many of his statues cannot be distinguished from Lysippus's work, for instance his Old Man of Thebes, his King Demetrius (Poliorcetes), and his Peucestes, the man who saved the life of Alexander the Great and so deserved the honour of this commemoration. *Lysippus' sons.* *Tisicrates.*

Artists [d] who have composed treatises recording these matters speak with marvellously high praise of Telephanes of Phocis, who is otherwise unknown, *Telephanes.*

[d] Pliny means the writers Xenocrates of Sicyon and Antigonus of Carystus, from whom, through Varro, much of Pliny's material about art comes.

caeum, ignotum alias, quoniam[1] . . . Thessaliae[2] habitaverit et ibi opera eius latuerint; alioqui suffragiis ipsorum aequatur Polyclito, Myroni, Pythagorae. laudant eius Larisam et Spintharum pentathlum et Apollinem. alii non hanc ignobilitatis fuisse causam, sed quod se regum Xerxis atque Darei officinis dediderit, existimant.

69 Praxiteles quoque, qui[3] marmore felicior, ideo et clarior fuit, fecit tamen et ex aere pulcherrima opera: Proserpinae raptum, item catagusam et Liberum patrem, Ebrietatem nobilemque una Satyrum, quem Graeci periboëton cognominant, et signa, quae ante Felicitatis aedem fuere, Veneremque, quae ipsa aedis incendio cremata est Claudii principatu, marmoreae illi suae per terras inclutae parem,
70 item stephanusam,[4] pseliumenen,[5] Oporan,[6] Harmodium et Aristogitonem tyrannicidas, quos a Xerxe Persarum rege captos victa Perside Atheniensibus remisit Magnus Alexander. fecit et puberem Apollinem subrepenti lacertae comminus sagitta

[1] *lac. C. F. W. Müller.*
[2] thessaliae *B*: in thessalia *rell.*
[3] qui *add. Mayhoff.*
[4] *Fortasse* ⟨se⟩ stephanusam *vel* stephanusam ⟨se⟩.
[5] pseliumenen *Urlichs, O. Jahn*: psellumenen *cd. Leid. Voss.*: *varia rell.*
[6] Oporan *cd. Flor. Ricc.*: *varia rell.* (oporum *cd. Par.* 6801): oenophorum *edd. vett.*: canephoram *Urlichs* (*immo* canephorum).

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[a] Κατάγουσα, from κατάγω 'draw down,' 'spin.'
[b] The wreath would be one bestowed on an athlete by the city (personified) when he won his victory; *pseliumene* is from ψελιῶ, and ψέλιον means an armlet.
[c] Not the actual tyrant Hippias but his brother and assistant Hipparchus, at Athens, 514–13 B.C.

since he lived at . . . in Thessaly where his works have remained in concealment, although these writers' own testimony puts him on a level with Polycleitus, Myron and Pythagoras. They praise his Larisa, his Spintharus the Five-bout Champion, and his Apollo. Others however are of opinion that the cause of his lack of celebrity is not the reason mentioned but his having devoted himself entirely to the studios established by King Xerxes and King Darius.

Praxiteles although more successful and therefore more celebrated in marble, nevertheless also made some very beautiful works in bronze: the Rape of Persephone, also The Girl Spinning,[a] and a Father Liber or Dionysus, with a figure of Drunkenness and also the famous Satyr, known by the Greek title Periboëtos meaning 'Celebrated,' and the statues that used to be in front of the Temple of Happiness, and the Aphrodite, which was destroyed by fire when the temple of that goddess was burnt down in the reign of Claudius, and which rivalled the famous Aphrodite, in marble, that is known all over the world; also A Woman Bestowing a Wreath, A Woman Putting a Bracelet on her Arm,[b] Autumn, Harmodius and Aristogeiton who slew the tyrant [c]—the last piece [d] carried off by Xerxes King of the Persians but restored to the Athenians by Alexander the Great after his conquest of Persia. Praxiteles also made a youthful Apollo called in Greek the Lizard-Slayer [e] because he is waiting with an arrow

Praxiteles. fl. c. 370 B.C.

A.D. 41–54.

480 B.C.

331 B.C.

[d] But the group carried off was by Antenor, and its restoration is attributed also to Seleucus I, and to Antiochus I. See note on pp. 256–257.

[e] Degenerate copies of this still exist.

insidiantem, quem sauroctonon vocant. spectantur et duo signa eius diversos adfectus exprimentia, flentis matronae et meretricis gaudentis. hanc putant Phrynen fuisse deprehenduntque in ea amorem artificis et mercedem in vultu meretricis.

71 habet simulacrum et benignitas eius; Calamidis enim quadrigae aurigam suum inposuit, ne melior in equorum effigie defecisse in homine crederetur. ipse Calamis et alias quadrigas bigasque fecit equis semper [1] sine aemulo expressis; sed, ne videatur in hominum effigie inferior, Alcmena [2] nullius est nobilior.

72 Alcamenes, Phidiae discipulus, et marmorea fecit, sed aereum pentathlum, qui vocatur encrinomenos; at Polycliti discipulus Aristides quadrigas bigasque. Amphicrates [3] Leaena laudatur. scortum haec, lyrae cantu familiaris Harmodio et Aristogitoni, consilia eorum de tyrannicidio usque in mortem excruciata a tyrannis non prodidit; quam ob rem Athenienses, et honorem habere ei volentes nec tamen scortum celebrasse, animal nominis eius fecere atque, ut intellegeretur causa honoris, in opere linguam addi ab artifice vetuerunt.

[1] equis semper *cdd.* (sem̄ pari equis *B*): se impari, equis *Traube.*

[2] alcumena *cd. deperd. ap. Dalecamp*: Achamene *edd. vett.*: Alcman poeta *Eugénie Sellers*: alchimena *aut* alcm- *cdd.* (alcamenet B^1: -me et B^2).

[3] iphicrates *cd. Par.* 6801: Tisicratis *Hardouin.*

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[a] Or, 'received by her.' The exact meaning is not clear.

[b] Or perhaps: 'Undergoing the test' for recognition as an athlete.

[c] Hippias and Thessalus of Athens after the killing of their brother, 514–13 B.C.; *cf.* § 70 above, and note.

for a lizard creeping towards him. Also two of his statues expressing opposite emotions are admired, his Matron Weeping and his Merry Courtesan. The latter is believed to have been Phryne and connoisseurs detect in the figure the artist's love of her and the reward promised him [a] by the expression on the courtesan's face. The kindness also of Praxiteles is represented in sculpture, as in the Chariot and Four of Calamis he contributed the charioteer, in order that the sculptor might not be thought to have failed in the human figure although more successful in representing horses. Calamis himself also made other chariots, some with four horses and some with two, and in executing the horses he is invariably unrivalled: but—that it may not be supposed that he was inferior in his human figures—his Alcmena is as famous as that of any other sculptor. *Calamis.*

Alcamenes a pupil of Pheidias made marble figures, and also in bronze a Winner of the Five Bouts, known by the Greek term meaning Highly Commended,[b] but Polycleitus's pupil Aristides made four-horse and pair-horse chariots. Amphicrates is praised for his Leaena; she was a harlot, admitted to the friendship of Harmodius and Aristogeiton because of her skill as a harpist, who though put to the torture by the tyrants [c] till she died refused to betray their plot to assassinate them. Consequently the Athenians wishing to do her honour and yet unwilling to have made a harlot famous, had a statue made of a lioness, as that was her name, and to indicate the reason for the honour paid her instructed the artist to represent the animal as having no tongue. *Alcamenes.* *Amphicrates.*

73 Bryaxis Aesculapium et Seleucum[1] fecit, Boëdas adorantem, Baton Apollinem et Iunonem, qui sunt
74 Romae in Concordiae templo, Cresilas[2] volneratum deficientem, in quo possit intellegi quantum restet animae, et Olympium Periclen dignum cognomine, mirumque in hac arte est quod nobiles viros nobiliores fecit. Cephisodorus[3] Minervam mirabilem in portu Atheniensium et aram ad templum Iovis Servatoris in eodem portu, cui pauca comparantur, Canachus
75 Apollinem nudum, qui Philesius cognominatur, in Didymaeo Aeginetica aeris temperatura, cervumque una ita vestigiis suspendit, ut linum[4] subter pedes trahatur alterno morsu calce digitisque retinentibus solum, ita vertebrato ungue[5] utrisque in partibus, ut a repulsu per vices resiliat. idem et celetizontas pueros, Chaereas Alexandrum Magnum et Philippum patrem eius fecit, Ctesilaus doryphoron et
76 Amazonem volneratam, Demetrius Lysimachen, quae sacerdos Minervae fuit LXIIII annis, idem et Minervam, quae mycetica[6] appellatur—dracones[7] in Gorgone eius ad ictus citharae tinnitu resonant;—

[1] Salutem *Hardouin.*
[2] ctesilas *cd. Leid. Voss.*: Ctesilaus *Hardouin.*
[3] Cephisodotus *Hardouin.*
[4] ut inlitum *B.*
[5] ungue *aut* pede *aut* vertebrata ungula *Warmington*: dente.
[6] mycetica *Traube*: myctica *Ian*: mystica *Fröhner*: myetica *B*: musica *rell.*
[7] dracones *B*: quoniam dracones *rell.*

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[a] Probably Seleucus I, King 312–280 B.C.
[b] 'Olympian,' 'High and Mighty,' as Pericles himself was called during his lifetime. Copies of this, and the *basis* of the original, still exist.

Bryaxis made statues of Asclepius and Seleucus,[a] Boëdas a Man Praying, Baton an Apollo and a Hera, both now in the Temple of Concord at Rome. Cresilas did a Man Fainting from Wounds, the expression of which indicates how little life remains, and the Olympian Pericles, a figure worthy of its title [b]; indeed it is a marvellous thing about the art of sculpture that it has added celebrity to men already celebrated. Cephisodorus made the wonderful Athene at the harbour of Athens and the almost unrivalled altar at the temple of Zeus the Deliverer at the same harbour, Canachus the naked Apollo, surnamed Philesius, at Didyma, made of bronze compounded at Aegina [c]; and with it he made a stag so lightly poised in its footprints as to allow of a thread being passed underneath its feet, the 'heel' and the 'toes' holding to the base with alternate contacts, the whole hoof being so jointed in either part that it springs back from the impact alternately.[d] He also made a Boys Riding on Race-horses. Chæreas did Alexander the Great and his father Philip, Ctesilaus a Man with a Spear and a Wounded Amazon, Demetrius Lysimache who was a priestess of Athene for 64 years, and also the Athene called the Murmuring Athene [e]—the dragons on her Gorgon's head sound with a tinkling note when a harp is struck; he likewise did

Other famous sculptors.

[c] Or, 'compounded on the Aeginetan formula.' Cf. § 10.

[d] Pliny is not clear; the MSS. reading *dente* ('tooth' not 'ivory'?) is altered here to *ungue* by conjecture. Perhaps he simply means that when the figure was rocked to and fro, a thread could be slipped under two feet. From coins we know that the small stag was not on the ground but on the god's hand.

[e] The right reading is unknown.

idem equitem Simonem, qui primus de equitatu scripsit. Daedalus, et ipse inter fictores laudatus, pueros duos destringentes se fecit, Dinomenes
77 Protesilaum et Pythodemum luctatorem. Euphranoris Alexander Paris est, in quo laudatur quod omnia simul intellegantur, iudex dearum, amator Helenae et tamen Achillis interfector. huius est Minerva, Romae quae dicitur Catuliana,[1] infra Capitolium a Q. Lutatio dicata, et simulacrum Boni Eventus, dextra pateram, sinistra spicam ac papavera tenens, item Latona puerpera Apollinem et Dianam infantes sustinens in aede Concordiae.
78 fecit et quadrigas bigasque et cliduchon[2] eximia forma et Virtutem et Graeciam, utrasque colossaeas, mulierem admirantem et adorantem, item Alexandrum et Philippum in quadrigis; Eutychides Eurotam, in quo artem ipso amne liquidiorem plurimi dixere. Hegiae Minerva Pyrrhusque rex laudatur et celetizontes pueri et Castor ac Pollux ante aedem Iovis Tonantis, Hagesiae in Pario colonia Hercules,
79 Isidoti[3] buthytes.[4] Lycius Myronis discipulus fuit, qui fecit dignum praeceptore puerum sufflantem languidos ignes et Argonautas; Leochares aquilam sentientem, quid rapiat in Ganymede et cui ferat,

[1] Catulina *Manutius.*
[2] cliduchon *Hermolaus Barbarus*: cliticon *B*: cliticum *rell.*
[3] *V.l.* Isidori.
[4] Buthytes *B*: Buthyres *rell.*: Eleuthereus *Hardouin.*

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[a] In Greek Ἀγαθὴ Τύχη. But it appears that the statue was one of Triptolemus, re-named as a Roman rustic divinity.
[b] Cf. § 54.
[c] The river on which Sparta stood.
[d] *c.* 318–272 B.C. But perhaps *rex*, king, should be deleted.
[e] Parium was made a Roman colony by Augustus.

the mounted statue of Simon who wrote the first treatise on horsemanship. Dædalus (also famous as a modeller in clay) made Two Boys using a Body-Scraper, and Dinomenes did a Protesilaus and the wrestler Pythodemus. The statue of Alexander Paris is by Euphranor; it is praised because it conveys all the characteristics of Paris in combination—the judge of the goddesses, the lover of Helen and yet the slayer of Achilles. The Athene, called at Rome the Catuliana, which stands below the Capitol and was dedicated by Quintus Lutatius 78 B.C.
Catulus, is Euphranor's, and so is the figure of Success,[a] holding a dish in the right hand and in the left an ear of corn and some poppies, and also in the temple of Concord a Leto as Nursing Mother, with the infants Apollo and Artemis in her arms. He also made four-horse and two-horse chariots, and an exceptionally beautiful Lady with the Keys,[b] and two colossal statues, one of Virtue and one of Greece, a Woman Wondering and Worshipping, and also an Alexander and a Philip in four-horse chariots. Eutychides did a Eurotas,[c] in which it has frequently been said that the work of the artist seems clearer than the water of the real river. The Athene and the King Pyrrhus [d] of Hegias are praised, and his Boys Riding on Race-horses, and his Castor and Pollux that stand before the temple of Jupiter the Thunderer; and so are Hagesias's Heracles in our colony [e] of Parium, and Isidotus's Man Sacrificing an Ox. Lycius who was a pupil of Myron did a Boy Blowing a Dying Fire that is worthy of his instructor, also a group of the Argonauts; Leochares an Eagle carrying off Ganymede in which the bird is aware of what his burden is and for whom he is

parcentemque unguibus etiam per vestem puero,[1]
Autolycum pancratii [2] victorem, propter quem
Xenophon symposium scripsit, Iovemque illum
Tonantem in Capitolio ante cuncta laudabilem, item
Apollinem diadematum, Lyciscum,[3] mangonem,[4]
puerum subdolae ac fucatae vernilitatis, Lycius
80 et ipse puerum suffitorem. Menaechmi vitulus
genu premitur replicata cervice. ipse Menaechmus
scripsit de sua arte. Naucydes Mercurio et dis-
cobolo et immolante arietem censetur, Naucerus [5]
luctatore anhelante,[6] Niceratus Aesculapio et
Hygia,[7] qui sunt in Concordiae templo Romae.
Pyromachi quadriga ab Alcibiade regitur. Polycles
Hermaphroditum nobilem fecit, Pyrrhus Hygiam
81 et Minervam, Phanis, Lysippi discipulus, epithyu-
san. Styppax Cyprius uno celebratur signo,
splanchnopte; Periclis Olympii vernula hic fuit
exta torrens ignemque oris pleni spiritu accendens.
Silanion Apollodorum fudit, fictorem et ipsum, sed
inter cunctos diligentissimum artis et iniquum
sui iudicem, crebro perfecta signa frangentem,
dum satiari cupiditate artis non quit, ideoque
82 insanum cognominatum—hoc in eo expressit, nec

[1] puero *B*: puerum *rell.*
[2] pancrati *B*: pancratio *rell.*
[3] lyciscum *B*: luciscus *rell.*: Lyciscus *Gelen.*
[4] mangonem *B*: langonem *vel* lagonem *rell.*
[5] Nauclerus *coni. Hardouin.*
[6] *V.l.* luctatorem anhelantem (fecit *add. edd. vett.*).
[7] Aesculapio et Hygia *coni. Ian*: aesculapium et hygiam *aut* a.h. *cdd.*: Hygiam fecit *Detlefsen.*

[a] The banquet described in Xenophon's *Symposium* was given by Callias in honour of Autolycus's victory in the pentathlum at the Great Panathenaea in 422 B.C.

[b] See § 74, note.

carrying it, and is careful not to let his claws hurt the boy even through his clothes, and Autolycus Winner of the All-round Bout, being also the athlete in whose honour Xenophon wrote his *Banquet*,[a] and the famous Zeus the Thunderer now on the Capitol, of quite unrivalled merit, also an Apollo crowned with a Diadem; also Lyciscus, the Slave-dealer, and a Boy, with the crafty cringing look of a household slave. Lycius also did a Boy Burning Perfumes. There is a Bull-calf by Menæchmus, on which a man is pressing his knee as he bends its neck back; Menæchmus has written a treatise about his own work. The reputation of Naucydes rests on his Hermes and Man throwing a Disc and Man Sacrificing a Ram, that of Naucerus on his Wrestler Winded, that of Niceratus on his Asclepius and his Goddess of Health, which are in the Temple of Concord at Rome. Pyromachus has an Alcibiades Driving a Chariot and Four; Polycles made a famous Hermaphrodite, Pyrrhus, a Goddess of Health and an Athene, Phanis, who was a pupil of Lysippus, a Woman Sacrificing. Styppax of Cyprus is known for a single statue, his Man Cooking Tripe, which represented a domestic slave of the Olympian[b] Pericles roasting inwards and puffing out his cheeks as he kindles the fire with his breath; Silanion cast a metal figure of Apollodorus, who was himself a modeller, and indeed one of quite unrivalled devotion to the art and a severe critic of his own work, who often broke his statues in pieces after he had finished them, his intense passion for his art making him unable to be satisfied, and consequently he was given the surname of the Madman—this quality he brought out in his statue, the Madman, which

hominem ex aere fecit, sed iracundiam—et Achillem nobilem, item epistaten exercentem athletas; Strongylion Amazonem, quam ab excellentia crurum eucnemon appellant, ob id in comitatu Neronis principis circumlatam. idem fecit puerum, quem amando Brutus Philippiensis cognomine suo inlus-
83 travit. Theodorus, qui labyrinthum fecit Sami, ipse se ex aere fudit. praeter similitudinis mirabilem famam[1] magna suptilitate celebratur:[2] dextra limam tenet, laeva tribus digitis quadrigulam tenuit, tralatam Praeneste parvitatis[3] ut miraculum:[4] pictam[5] eam currumque et aurigam integeret alis simul facta musca. Xenocrates, Tisicratis discipulus, ut alii, Euthycratis, vicit utrosque copia signorum. et de sua arte composuit volumina.

84 Plures artifices fecere Attali et Eumenis adversus Gallos proelia, Isigonus, Pyromachus, Stratonicus, Antigonus, qui volumina condidit de sua arte. Boëthi, quamquam argento melioris, infans amplexando[6] anserem strangulat. atque ex omnibus, quae rettuli, clarissima quaeque in urbe iam sunt dicata a

[1] similitudinis mirabilem famam *B*: similitudinem fama *rell.*: s. nobilem f. *edd. vett.*

[2] celebratur *J. Müller*: celebratus.

[3] parvitatis *B*: tantae p. *rell.*

[4] miraculū *Mayhoff*: ut miraculo *B* (*om.* miraculo *rell.*): ut mirum dictu *Traube*: *del.* ut *Urlichs*.

[5] pictam *B*: totam *rell.*: fictam *Stuart Jones*: pictam ut *Urlichs*.

[6] amplexando *Traube*: annosum (*olim* vi annisus) *Buecheler*: vi annosum *Meister*: vi *Külb*: vi aenum *Boisacq*: ex aere *H. Stein*: sexennis *O. Jahn*: ex animo *Ian*: ulnis *Urlichs*: eximiū *Mayhoff*: sex anno *B*: sex annis B^2: eximie *aut* eximiae *rell.*

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[a] The temple of Hera.

represented in bronze not a human being but anger personified. Silanion also made a famous Achilles, and also a Superintendent Exercising Athletes; Strongylion made an Amazon, which from the remarkable beauty of the legs is called the Eucnemon, and which consequently the emperor Nero caused to be carried in his retinue on his journeys. The same sculptor made the figure rendered famous by Brutus under the name of Brutus's Boy because it represented a favourite of the hero of the battles at 42 B.C.
Philippi. Theodorus, who constructed the Labyrinth[a] at Samos, cast a statue of himself in bronze. Besides its remarkable celebrity as a likeness, it is famous for its very minute workmanship; the right hand holds a file, and three fingers of the left hand originally held a little model of a chariot and four, but this has been taken away to Palestrina as a marvel of smallness: if the team were reproduced in a picture with the chariot and the charioteer, the model of a fly, which was made by the artist at the same time, would cover it with its wings. Xenocrates, who was a pupil of Tisicrates, or by other accounts of Euthycrates, surpassed both of the last mentioned in the number of his statues; and he also wrote books about his art.

Several artists have represented the battles of Attalus[b] and Eumenes against the Gauls, Isigonus, Pyromachus, Stratonicus and Antigonus, who wrote books about his art. Boëthus did a Child[c] Strangling a Goose by hugging it, although he is better in silver. And among the list of works I have referred to all the most celebrated have now been dedicated by the

[b] Attalus I of Pergamum, who dealt with Gallic invaders of Asia Minor between 240 and 232 B.C. [c] Copies exist.

Vespasiano principe in templo Pacis aliisque eius operibus, violentia Neronis in urbem convecta et in sellariis domus aureae disposita.

85 Praeterea sunt aequalitate celebrati artifices, sed nullis operum suorum praecipui; Ariston, qui et argentum caelare solitus est, Callides,[1] Ctesias, Cantharus Sicyonius, Dionysius, Diodorus,[2] Critiae discipulus, Deliades, Euphorion, Eunicus et Hecataeus, argenti caelatores, Lesbocles, Prodorus, Pythodicus, Polygnotus, idem pictor e nobilissimis,[3] item e caelatoribus Stratonicus, Scymnus Critiae discipulus.

86 Nunc percensebo eos, qui eiusdem generis opera fecerunt, ut Apollodorus, Androbulus, Asclepiodorus, Aleuas philosophos, Apellas et adornantes[4] se[5] feminas, Antignotus et [luctatores,][6] perixyomenum, tyrannicidasque supra dictos, Antimachus, Athenodorus feminas nobiles, Aristodemus et luctatores bigasque cum auriga, philosophos, anus, Seleucum regem. habet gratiam suam huius quoque dory-
87 phorus. Cephisodoti duo fuere: prioris est Mercurius Liberum patrem in infantia nutriens; fecit et contionantem manu elata—persona in incerto est; sequens philosophos fecit. Colotes, qui cum Phidia Iovem Olympium fecerat, philosophos, item Cleon

[1] callases *cd. Par.* 6801: Callicles *Urlichs*: Calliades *Hardouin.*

[2] Dionysius, Diodorus *Detlefsen*: diodorus *B*: dionysiodorus *aut* dionysodorus *rell.*

[3] *V.l.* idem pictores nobilissimi.

[4] *V.l.* adorantes.

[5] se *cd. Leid. Voss.*: *om. rell.*

[6] et luctatores *cdd.*: *om.* luctatores *B, cd. Par. Lat.* 6797.

emperor Vespasian in the Temple of Peace and his other public buildings; they had been looted by Nero, who conveyed them all to Rome and arranged them in the sitting-rooms of his Golden Mansion. A.D. 75.

Besides these, artists on the same level of merit but of no outstanding excellence in any of their works are: Ariston, who often also practised chasing silver, Callides, Ctesias, Cantharus of Sicyon, Dionysius, Diodorus the pupil of Critias, Deliades, Euphorion, Eunicus and Hecatæus the silver chasers, Lesbocles, Prodorus, Pythodicus, Polygnotus, who was also one of the most famous among painters, similarly Stratonicus among chasers, and Critias's pupil Scymnus.

I will now run through the artists who have made works of the same class, such as Apollodorus, Androbulus and Asclepiodorus, Aleuas, who have done philosophers, and Apellas also women donning their ornaments, and Antignotus also Man using a Body-scraper and the Men[a] that Slew the Tyrant, above-mentioned, Antimachus, Athenodorus who made splendid figures of women, Aristodemus who also did Wrestlers, and Chariot and Pair with Driver, figures of philosophers, of old women, and King Seleucus; Aristodemus's Man holding Spear is also popular. There were two artists named Cephisodotus; the Hermes Nursing Father Liber or Dionysos when an Infant belongs to the elder, who also did a Man Haranguing with Hand Uplifted—whom it represents is uncertain. The later Cephisodotus did philosophers. Colotes who had co-operated with Pheidias in the Olympian §§ 19, 54.
Zeus made statues of philosophers, as also did Cleon

[a] Harmodius and Aristogeiton. See §§ 70, 72.

et Cenchramis [1] et Callicles et Cepis, Chalcosthenes [2] et comoedos et athletas, Daippus perixyomenon, Daiphron et Damocritus et Daemon philosophos.
88 Epigonus omnia fere praedicta imitatus praecessit in tubicine et matri interfectae infante miserabiliter blandiente. Eubuli mulier admirans laudatur, Eubulidis digitis computans. Micon athletis spectatur, Menogenes quadrigis. Nec minus Niceratus omnia, quae ceteri, adgressus repraesentavit Alcibiaden lampadumque accensu matrem eius Demaraten
89 sacrificantem. Tisicratis bigae Piston mulierem inposuit, idem fecit Martem et Mercurium, qui sunt in Concordiae templo Romae. Perillum nemo laudet saeviorem Phalaride tyranno, cui taurum fecit mugitus inclusi [3] hominis pollicitus igni subdito et [4] primus expertus cruciatum eum iustiore saevitia. huc a simulacris deorum hominumque devocaverat humanissimam artem. ideo tot conditores eius laboraverant, ut ex ea tormenta fierent! itaque una de causa servantur opera eius, ut quisquis illa videat,
90 oderit manus. Sthennis Cererem, Iovem, Minervam fecit, qui sunt Romae in Concordiae templo, idem

[1] Cenchramus *Overbeck.*
[2] calcostenes *B*: Caecosthenes (=Καϊκοσθένης) *Overbeck.*
[3] inclusi *add. Mayhoff.*
[4] et *B*: *v.ll.* ex, est: exprimere *Detlefsen.*

[a] This should be Dinomache.

and Cenchramis and Callicles and Cepis; Chalcosthenes also did actors in comedy and athletes; Daippus a Man using a Scraper; Daiphron, Damocritus and Dæmon statues of philosophers. Epigonus, who copied others in almost all the subjects already mentioned, took the lead with his Trumpet-player and his Weeping Infant pitifully caressing its Murdered Mother. Praise is given to Eubulus's Woman in Admiration and to Eubulides's Person Counting on the Fingers. Micon is noticed for his athletes and Menogenes for his chariots and four. Niceratus, who likewise attempted all the subjects employed by any other sculptor, did a statue of Alcibiades and one of his mother Demarate,[a] represented as performing a sacrifice by torch-light. Tisicrates did a pair-horse chariot in which Piston afterwards placed a woman; the latter also made an Ares and a Hermes now in the Temple of Concord at Rome. No one should praise Perillus, who was c. 570 B.C.
more cruel than the tyrant Phalaris, for whom he made a bull, guaranteeing that if a man were shut up inside it and a fire lit underneath the man would do the bellowing; and he was himself the first to experience this torture—a cruelty more just than the one he proposed. Such were the depths to which the sculptor had diverted this most humane of arts from images of gods and men! All the founders of the art had only toiled so that it should be employed for making implements of torture! Consequently this sculptor's works are preserved for one purpose only, so that whoever sees them may hate the hands that made them. Sthennis did a Demeter, a Zeus and an Athene that are in the Temple of Concord at Rome, and also Weeping

flentes matronas et adorantes sacrificantesque. Simon canem et sagittarium fecit, Stratonicus
91 caelator ille philosophos, copas [1] uterque;[2] athletas autem et armatos et venatores sacrificantesque Baton, Euchir, Glaucides, Heliodorus, Hicanus, Iophon,[3] Lyson, Leon, Menodorus, Myagrus, Polycrates, Polyidus,[4] Pythocritus, Protogenes, idem pictor e clarissimis, ut dicemus, Patrocles,[5] Pollis, Posidonius, qui et argentum caelavit nobiliter, natione Ephesius, Periclymenus, Philon, Symenus, Timotheus, Theomnestus, Timarchides, Timon, Tisias, Thrason.

92 Ex omnibus autem maxime cognomine insignis est Callimachus, semper calumniator sui nec finem habentis diligentiae, ob id catatexitechnus appellatus, memorabili [6] exemplo adhibendi et curae modum. huius sunt saltantes Lacaenae, emendatum opus, sed in quo gratiam omnem diligentia abstulerit. hunc quidem et pictorem fuisse tradunt. non aere captus nec arte, unam tantum Zenonis statuam Cypria expeditione non vendidit Cato, sed quia philosophi erat, ut obiter hoc quoque noscatur tam insigne [7] exemplum.

93 In mentione statuarum est et una non praeter-

[1] copas *Gerhard*: scopas.
[2] uterque *cdd.* (utrosque B^1, utraque B^2): utrasque *edd. vett.*
[3] Iophon *Urlichs*: Leophon *Sillig*: Herophon *Loewy*: olophon *B*: lophon *rell.*
[4] Polydorus *Hermolaus Barbarus.*
[5] Patroclus *coni. Sillig coll.* § 50.
[6] memorabili *B, cd. Par.* 6801: memorabilis *rell.*
[7] insigne *Pintianus*: inane.

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[a] The doubtful text may contain the name Scopas; see critical notes.
[b] κατατηξίτεχνος, one who wastes his skill in driblets.

Matrons and Matrons at Prayer and Offering a Sacrifice. Simon made a Dog and an Archer, the famous engraver Stratonicus some philosophers and each of these artists made figures of hostesses of inns.[a] The following have made figures of athletes, armed men, hunters and men offering sacrifice: Baton, Euchir, Glaucides, Heliodorus, Hicanus, Iophon, Lyson, Leon, Menodorus, Myagrus, Polycrates, Polyidus, Pythocritus, Protogenes (who was also, as we shall say later, one of the most famous painters), Patrocles, Pollis and Posidonius (the last also a distinguished silver chaser, native of Ephesus), Periclymenus, Philo, Symenus, Timotheus, Theomnestus, Timarchides, Timon, Tisias, Thraso. XXXV. 101 *sqq.*

But of all Callimachus is the most remarkable, because of the surname attached to him: he was always unfairly critical of his own work, and was an artist of never-ending assiduity, and consequently he was called the Niggler,[b] and is a notable warning of the duty of observing moderation even in taking pains. To him belongs the Laconian Women Dancing, a very finished work but one in which assiduity has destroyed all charm. Callimachus is reported to have also been a painter. Cato in his expedition to Cyprus sold all the statues found there except one of Zeno; it was not the value of the bronze nor the artistic merit that attracted him, but its being the statue of a philosopher: I mention this by the way, to introduce this distinguished[c] instance also. *flor.* c. 400 B.C. 58–56 B.C.

In mentioning statues—there is also one we must

[c] The MSS. give 'this empty example,' explained as implying that Cato neglected the example set by his great grandfather, Cato the Censor who disliked the Greeks.

eunda, quamquam auctoris incerti, iuxta rostra, Herculis tunicati, sola eo habitu Romae, torva facie sentiensque[1] suprema tunicae.[2] in hac tres sunt tituli: L. Luculli imperatoris de manubiis, alter: pupillum Luculli filium ex S. C. dedicasse, tertius: T. Septimium Sabinum aed. cur. ex privato in publicum restituisse. tot certaminum tantaeque dignationis simulacrum id fuit.

94 XX. Nunc praevertemur[3] ad differentias aeris et mixturas. in Cyprio [coronarium et regulare est utrumque ductile][4] coronarium tenuatur in lamnas, taurorumque felle tinctum speciem auri in coronis histrionum praebet, idemque in uncias additis auri scripulis senis praetenui pyropi brattea ignescit. regulare et in aliis fit metallis, itemque caldarium. differentia quod caldarium funditur tantum, malleis fragile, quibus regulare obsequitur ab aliis ductile appellatum, quale omne Cyprium est. sed et in ceteris metallis cura distat a caldario; omne enim diligentius purgatis igni vitiis excoctisque regulare

95 est. In reliquis generibus palma Campano perhi-

[1] sentiensque *B*: sentientique *rell.*: sentienteque *edd. vett.*
[2] tunicae *B*: tunica *rell.*: in tunica *edd. vett.*
[3] *V.l.* revertemur.
[4] coronarium . . . . ductile *cd. Vind.*: *om. rell.*

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[a] *I.e.* the poisoned garment that caused his death.
[b] In campaigns against Mithridates, 74–67 B.C.

not pass over in spite of the sculptor's not being known—the figure, next to the Beaked Platform, of Heracles in the Tunic,[a] the only one in Rome that shows him in that dress; the countenance is stern and the statue expresses the feeling of the final agony of the tunic. On this statue there are three inscriptions, one stating that it had been part of the booty taken [b] by the general Lucius Lucullus, and another saying that it was dedicated, in pursuance of a decree of the Senate, by Lucullus's son while still a ward, and the third, that Titus Septimius Sabinus as curule ædile had caused it to be restored to the public from private ownership. So many were the rivalries connected with this statue and so highly was it valued.

Various forms and blends of copper and bronze.

XX. But we will now turn our attention particularly to the various forms of copper, and its blends. In the case of the copper of Cyprus 'chaplet copper' is made into thin leaves, and when dyed with ox-gall gives the appearance of gilding on theatrical property coronets; and the same material mixed with gold in the proportion of six scruples of gold to the ounce makes a very thin plate called pyropus, 'fire-coloured' and acquires the colour of fire. Bar copper also is produced in other mines, and likewise fused copper. The difference between them is that the latter can only be fused, as it breaks under the hammer, whereas bar copper, otherwise called ductile copper, is malleable, which is the case with all Cyprus copper. But also in the other mines, this difference of bar copper from fused copper is produced by treatment; for all copper after impurities have been rather carefully removed by fire and melted out of it becomes bar copper. Among the remaining kinds

betur,[1] utensilibus vasis[2] probatissimo. pluribus fit hoc modis. namque Capuae liquatur non carbonis ignibus, sed ligni, purgaturque roboreo cribro[3] profusum in[4] aquam frigidam ac saepius simili modo coquitur, novissime additis plumbi argentarii Hispaniensis denis libris in centenas aeris. ita lentescit coloremque iucundum trahit, qualem in aliis generibus
96 aeris adfectant oleo ac sale. fit Campano[1] simile in multis partibus Italiae provinciisque, sed octonas plumbi libras addunt et carbone recocunt propter inopiam ligni. quantum ea res differentiae adferat, in Gallia maxime sentitur, ubi inter lapides candefactos funditur; exurente enim coctura nigrum atque fragile conficitur. praeterea semel recoquunt quod saepius fecisse bonitati plurimum confert. id quoque notasse non ab re est, aes omne frigore magno melius fundi.

97 Sequens temperatura statuaria est eademque tabularis hoc modo: massa proflatur in primis, mox in proflatum additur tertia portio aeris collectanei, hoc est ex usu coempti. peculiare in eo condimentum attritu domiti et consuetudine nitoris veluti mansuefacti. miscentur et plumbi argentarii pondo
98 duodena ac selibrae centenis proflati. Appellatur

[1] perhibetur . . . campano (§ 96 *init.*) *B*: *om. rell.*
[2] vasorum *coni. Warmington coll.* XIII. 72.
[3] ligno *K. C. Bailey.*
[4] in *add. K. C. Bailey*: perfusum aqua frigida *Sillig.*

[a] Tin and lead mixed in equal parts.
[b] Possibly mineral coal.

of copper the palm goes to bronze of Campania, which is most esteemed for utensils. There are several ways of preparing it. At Capua it is smelted in a fire of wood, not of charcoal, and then poured into cold water and cleaned in a sieve made of oak, and this process of smelting is repeated several times, at the last stage Spanish silver lead [a] being added to it in the proportion of ten pounds to one hundred pounds of copper: this treatment renders it pliable and gives it an agreeable colour of a kind imparted to other sorts of copper and bronze by means of oil and salt. Bronze resembling the Campanian is produced in many parts of Italy and the provinces, but there they add only eight pounds of lead, and do additional smelting with charcoal [b] because of their shortage of wood. The difference produced by this is noticed specially in Gaul, where the metal is smelted between stones heated red hot, as this roasting scorches it and renders it black and friable. Moreover they only smelt it again once whereas to repeat this several times contributes a great deal to the quality. It is also not out of place to notice that all copper and bronze fuses better in very cold weather.

Blends for statues and moulds.

The proper blend for making statues is as follows, and the same for tablets: at the outset the ore is melted, and then there is added to the melted metal a third part of scrap copper, that is copper or bronze that has been bought up after use. This contains a peculiar seasoned quality of brilliance that has been subdued by friction and so to speak tamed by habitual use. Silver-lead is also mixed with it in the proportion of twelve and a half pounds to every hundred pounds of the fused metal. There is also

etiamnum et formalis temperatura aeris tenerrimi, quoniam nigri plumbi decima portio additur et argentarii vicesima, maximeque ita colorem bibit, quem Graecanicum vocant. Novissima est quae vocatur ollaria, vase nomen hoc dante, ternis aut quaternis libris plumbi argentarii in centenas aeris additis. Cyprio si addatur plumbum, colos purpurae fit in statuarum praetextis.

99 XXI. Aera extersa robiginem celerius trahunt quam neglecta, nisi oleo perunguantur. servari ea optime in liquida pice tradunt. usus aeris ad perpetuitatem monimentorum iam pridem tralatus est tabulis aereis, in quibus publicae constitutiones inciduntur.

100 XXII. Metalla aeris multis modis instruunt medicinam, utpote cum ulcera omnia ibi ocissime sanentur, maxime tamen prodest [1] cadmea. fit sine dubio haec et in argenti fornacibus, candidior ac minus ponderosa, sed nequaquam comparanda aerariae. plura autem genera sunt. namque ut ipse lapis, ex quo fit aes, cadmea vocatur, fusuris necessarius, medicinae inutilis, sic rursus in fornacibus existit
101 alia, quae [2] originis suae nomen [3] recipit. fit autem

[1] prodest *cd. Par.* 6801, *cd. Flor. Ricc.?* prosunt *rell.*
[2] alia quae *aut* aliamque *cdd.*: aliaque aliam *J. Müller.*
[3] originis suae nomen *Mayhoff*: nominis sui originem *cdd. item Isid.* XVI. 20. 12.

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[a] A blend for making moulds.
[b] The colour is in fact green. One expects the word *aeruginem* here.
[c] See the next two notes.
[d] *Cf.* § 2 of this book (p. 126); mineral calamine and smithsonite = silicate and carbonate of zinc.
[e] Furnace calamine = oxide of zinc. *Cf.* K. C. Bailey, *The Elder Pliny's Chapters on Chemical Subjects*, II, pp. 166–7.

in addition what is called the mould-blend[a] of bronze of a very delicate consistency, because a tenth part of black lead is added and a twentieth of silver-lead: and this is the best way to give it the colour called Græcanic 'after the Greek.' The last kind is that called pot-bronze, taking its name from the vessels made of it; it is a blend of three or four pounds of silver-lead with every hundred pounds of copper. The addition of lead to Cyprus copper produces the purple colour seen in the bordered robes of statues.

XXI. Things made of copper or bronze get covered with copper-rust[b] more quickly when they are kept rubbed clean than when they are neglected, unless they are well greased with oil. It is said that the best way of preserving them is to give them a coating of liquid vegetable pitch. The employment of bronze was a long time ago applied to securing the perpetuity of monuments, by means of bronze tablets on which records of official enactments are made. *Copper-rust.*

XXII. Copper ores and mines supply medicaments in a variety of ways: inasmuch as in their neighbourhood all kinds of ulcers are healed with the greatest rapidity; yet the most beneficial is *cadmea*.[c] This is certainly also produced in furnaces where silver is smelted, this kind being whiter and not so heavy, but it is by no means to be compared with that from copper. There are however several varieties; for while the mineral itself[d] from which the metal is made is called *cadmea*, which is necessary for the fusing process but is of no use for medicine, so again another kind[e] is found in furnaces, which is given a name indicating its origin. It is produced by the thinnest *'Cadmea.'*

egesta flammis atque flatu tenuissima parte materiae et camaris lateribusque fornacium pro quantitate levitatis adplicata. tenuissima est in ipso fornacium ore quam flammae eructarunt,[1] appellata capnitis, exusta et nimia levitate similis favillae. interior optuma, camaris dependens et ab eo argumento botryitis nominata, ponderosior haec priore, levior
102 secuturis—duo eius colores, deterior cinereus, pumicis melior —, friabilis oculorumque medicamentis utilissima. tertia est in lateribus fornacium, quae propter gravitatem ad camaras pervenire non potuit. haec dicitur placitis, et ipsa ab argumento planitiei[2] crusta verius quam pumex, intus varia, ad psoras
103 utilior et cicatrices trahendas. fiunt[3] ex ea duo alia genera; onychitis extra paene caerulae, intus onychis maculis similis, ostracitis tota nigra et e ceteris sordidissima, volneribus maxime utilis. omnis autem cadmea, in Cypri[4] fornacibus optima, iterum a medicis coquitur carbone puro atque, ubi in cinerem rediit, extinguitur vino Ammineo quae ad emplastra praeparatur, quae vero ad psoras, aceto.
104 quidam in ollis fictilibus tusam urunt et lavant in

[1] *V.ll.* quae *aut* que *aut* qua flamma eructatur *aut* eructantur *aut* fluctuantur: eructarunt *Mayhoff.*
[2] planitiei *Salmasius*: planitie.
[3] fiunt *B*: fluunt *rell.*
[4] Cypriis *coni. Mayhoff*: cyprio *aut* cypria *aut* cypri.

part of the substance being separated out by the flames and the blast and becoming attached in proportion to its degree of lightness to the roof-chambers and side-walls of the furnaces, the thinnest being at the very mouth of the furnace, which the flames have belched out; it is called 'smoky *cadmea*' from its burnt appearance and because it resembles hot white ash in its extreme lightness. The part inside is best, hanging from the vaults of the roof-chamber, and this consequently is designated 'grape-cluster *cadmea*': this is heavier than the preceding kind but lighter than those that follow—it is of two colours, the inferior kind being the colour of ash and the better the colour of pumice—and it is friable, and extremely useful for making medicaments for the eyes. A third sort is deposited on the sides of furnaces, not having been able to reach the vaults because of its weight; this is called in Greek 'placitis,' 'caked residue,' in this case by reason of its flatness, as it is more of a crust than pumice, and is mottled inside; it is more useful for itch-scabs and for making wounds draw together into a scar. Of this kind are formed two other varieties, onychitis which is almost blue outside but inside like the spots of an onyx or layered quartz, and ostracitis 'shell-like residue' which is all black and the dirtiest of any of the kinds; this is extremely useful for wounds. All kinds of *cadmea* (the best coming from the furnaces of Cyprus) for use in medicine are heated again on a fire of pure charcoal and, when it has been reduced to ash, if being prepared for plasters it is quenched with Amminean wine, but if intended for itch-scabs with vinegar. Some people pound it and then burn it in earthenware pots, wash it in

mortariis, postea siccant. Nymphodorus lapidem ipsum quam gravissimum spississimumque urit pruna et exustum Chio vino restinguit tunditque, mox linteo cribrat atque in mortario terit, mox aqua pluvia macerat iterumque terit quod subsedit, donec cerussae simile fiat, nulla dentium offensa. eadem Iollae ratio, sed quam purissimum eligit lapidem.
105 XXIII. cadmeae effectus siccare, persanare, sistere fluctiones, pterygia et sordes oculorum purgare, scabritiam extenuare et quidquid in plumbi effectu dicemus.

Et aes ipsum uritur ad omnia eadem, praeterque albugines oculorum et cicatrices, ulcera quoque oculorum cum lacte sanat; itaque Aegyptii collyrii
106 id modo terunt in coticulis. facit et vomitiones e melle sumptum. uritur autem Cyprium in fictilibus crudis cum sulpuris pari pondere, vasorum[1] circumlito spiramento, in caminis, donec vasa ipsa percoquantur. quidam et salem addunt, aliqui alumen pro sulpure, alii nihil, sed aceto tantum aspergunt. ustum teritur in[2] mortario Thebaico, aqua pluvia lavatur iterumque adiecta largiore teritur et, dum considat, relinquitur, hoc saepius, donec ad speciem

[1] vasorum *Mayhoff*: vaso *aut* vase.
[2] in *add. Mayhoff.*

[a] A medical man of the third century B.C.

mortars and afterwards dry it. Nymphodorus's [a] process is to burn on hot coals the most heavy dense piece of *cadmea* that can be obtained, and when it is thoroughly burnt to quench it with Chian wine, and pound it, and then to sift it through a linen cloth and grind it in a mortar, and then macerate it in rain-water and again grind the sediment that sinks to the bottom till it becomes like white lead and offers no grittiness to the teeth. Iollas' [b] method is the same, but he selects the purest specimens of native *cadmea*. XXIII. The effect of *cadmea* is to dry moisture, to heal lesions, to stop discharges, to cleanse inflamed swellings and foul sores in the eyes, to remove eruptions, and to do everything that we shall specify in dealing with the effect of lead.

Copper itself is roasted to use for all the same purposes and for white-spots and scars in the eyes besides, and mixed with milk it also heals ulcers in the eyes; and consequently people in Egypt make a kind of eye-salve by grinding it in small mortars. Taken with honey it also acts as an emetic, but for this Cyprian copper with an equal weight of sulphur is roasted in pots of unbaked earthenware, the mouth of the vessels being stopped with oil; and then left in the furnace till the vessels themselves are completely baked. Certain persons also add salt, and some use alum instead of sulphur, while others add nothing at all, but only sprinkle the copper with vinegar. When burnt it is pounded in a mortar of Theban stone, washed with rainwater, and then again pounded with the addition of a larger quantity of water, and left till it settles, and this process is repeated several times, till it is reduced

[b] A Bithynian medical writer of unknown date.

minii redeat. tunc siccatum in sole in aerea pyxide servatur.

107 XXIV. Et scoria aeris simili modo lavatur, minore[1] effectu quam ipsum aes. sed et aeris flos medicinae utilis est. fit aere fuso et in alias fornaces tralato; ibi flatu crebriore excutiuntur veluti milii squamae, quas vocant florem; cadunt autem, cum panes aeris aqua refrigerantur, rubentque similiter squamae aeris, quam vocant lepida, et sic adulteratur flos, ut squama veneat pro eo. est autem squama aeris decussa vi clavis, in quos panes aerei feruminantur,[2] in Cypri maxime officinis. omnis[3] differentia haec est, quod squama excutitur ictu isdem panibus, flos

108 cadit sponte. squamae est alterum genus suptilius, ex summa scilicet lanugine decussum, quod vocant stomoma.

XXV. Atque haec omnia medici—quod pace eorum dixisse liceat—ignorant. parent[4] nominibus: in tantum[5] a conficiendis medicaminibus absunt, quod esse proprium medicinae solebat. nunc quotiens incidere in libellos, componere ex iis volentes aliqua, hoc est impendio miserorum experiri[6] commentaria,[7] credunt Seplasiae omnia fraudibus cor-

[1] minor *cdd. fere omnes.*
[2] formantur *coni. Eichholz.*
[3] omnis *Mayhoff* (*qui et* summa *coni.*): omnia.
[4] parent *Urlichs*: paret *B*: pars maior et *rell.*: p.m. paret *Detlefsen.* [4–5] parent nominibus hi: tantum *coni. Mayhoff.*
[6] *V.l.* expediri.
[7] commentariaque *B*: *supra post* libellos *trans. Urlichs.*

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[a] The dross produced when the ore is fused.
[b] Probably in the main red cuprous oxide (not black cupric oxide) with some metallic copper in it.
[c] Seplasia was the special quarter of Capua where perfumes were sold.

to the appearance of cinnabar; then it is dried in the sun and put to keep in a copper box.

XXIV. The slag [a] of copper is also washed in the same way, but it is less efficacious than copper itself. The flower [b] of copper also is useful as a medicine. It is made by fusing copper and then transferring it to other furnaces, where a faster use of the bellows makes the metal give off layers like scales of millet, which are called the flower. However when the sheets of copper are cooled off in water they shed off other scales of copper of a similar red hue—this scale is called by the Greek word meaning 'husk'—and by this process the flower is adulterated, so that the scale is sold as a substitute for it. On the other hand, scale of copper is forcibly knocked off bolts into which are welded cakes of the metal, specially in the factories of Cyprus. The whole difference is that the scale is detached from the cakes by successive hammerings, whereas the flower falls off of its own accord. There is another finer kind of scale, the one knocked off from the down-like surface of the metal, the name for which is 'stomoma.'

Slag, scales and flower of copper.

XXV. But of all these facts the doctors, if they will permit me to say so, are ignorant—they are governed by names: so detached they are from the process of making up drugs, which used to be the special business of the medical profession. Nowadays whenever they come on books of prescriptions, wanting to make up some medicines out of them, which means to make trial of the ingredients in the prescriptions at the expense of their unhappy patients, they rely on the fashionable druggists' shops [c] which spoil everything with fraudulent adulterations, and for a long time they have been

rumpenti. iam pridem[1] facta emplastra et collyria mercantur, tabesque mercium aut fraus Seplasiae sic exhibetur![2]

109 Et squama autem et flos uruntur in patinis fictilibus aut aereis, dein lavantur ut supra ad eosdem usus; squama[3] et amplius narium carnosa vitia, item sedis, et gravitates aurium per fistulam in eas flatu inpulsa et uvas oris farina admota tollit et tonsillas cum melle. fit ex candido aere squama longe Cypria inefficacior. nec non urina pueri prius macerant clavos panesque quidam excussuri squamam, teruntque et aqua pluvia lavant. dant et hydropicis eam drachmis II in mulsi hemina et inlinunt cum polline.

110 XXVI. Aeruginis quoque magnus usus est. pluribus fit modis. namque et lapidi, ex quo coquitur aes, deraditur, et aere candido perforato atque in cadis suspenso super acetum acre opturatumque operculo. multo probatior est, si hoc idem squamis fiat. quidam visa ipsa candidi aeris fictilibus con-
111 dunt in acetum raduntque decumo die. alii vinaceis contegunt totidemque post dies radunt, alii delimatam aeris scobem aceto spargunt versantque spathis saepius die, donec absumatur. eandem scobem

[1] pridem *edd. vett.*: quidem.

[2] sic exhibetur *Warmington*: sic excitetur *Mayhoff* (*qui et* excitatur *coni.*): exsiccatur *coni. Sillig*: sicce taxetur *Ian*: *alii alia*: sic cexatetur B^1: sicce sane duret B^2: sic exteritur *rell. recte?*

[3] squama *Mayhoff*: que *cd. Leid. Voss., cd. Flor. Ricc.*: *om. rell.*

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[a] Or, if we read *exteritur* (is ground out), 'finds its way into the mortar' (thus K. C. Bailey).

[b] Brass. [c] Basic copper carbonate.

[d] Basic copper acetate or true verdigris, which does not occur in a natural state.

buying plasters and eye-salves ready made; and thus is deteriorated rubbish of commodities and the fraud of the druggists' trade put on show.[a]

Both scale however and flower of copper are burnt in earthenware or copper pans and then washed, as described above, to be applied to the same purposes; § 106.
the scale also in addition removes fleshy troubles in the nostrils and also in the anus and dullness of hearing if forcibly blown into the ears through a tube, and, when applied in the form of powder, removes swellings of the uvula, and, mixed with honey, swellings of the tonsils. There is a scale from white copper[b] that is far less efficacious than the scale from Cyprus; and moreover some people steep the bolts and cakes of copper beforehand in a boy's urine when they are going to detach the scale, and pound them and wash them with rainwater. It is also given to dropsical patients in doses of two drams in half a sextarius of honey-wine; and mixed with fine flour it is applied as a liniment.

XXVI. Great use is also made of verdigris. *Verdigris.*
There are several ways of making it; it[c] is scraped off the stone from which copper is smelted, or by[d] drilling holes in white copper[b] and hanging it up in casks over strong vinegar which is stopped with a lid; the verdigris is of much better quality if the same process is performed with scales of copper. Some people put the actual vessels, made of white copper, into vinegar in earthenware jars, and nine days later scrape them. Others cover the vessels with grape-skins and scrape them after the same interval, others sprinkle copper filings with vinegar and several times a day turn them over with spattles till the copper is completely dissolved. Others

alii terere in mortariis aereis ex aceto malunt. ocissime vero contingit coronariorum recisamentis in
112 acetum id[1] additis. adulterant marmore trito maxime Rhodiam aeruginem, alii pumice aut cummi. praecipue autem fallit atramento sutorio adulterata; cetera enim dente deprehenduntur stridentia in frendendo. experimentum in vatillo ferreo, nam quae sincera est, suum colorem retinet, quae mixta atramento, rubescit. deprehenditur et papyro galla prius macerato, nigrescit enim statim aerugine inlita. deprehenditur et visu maligne
113 virens. sed sive sinceram sive adulteram[2] aptissimum est elui siccatamque in patina nova uri ac versari, donec favilla fiat; postea teritur ac reconditur. aliqui in crudis fictilibus urunt, donec figlinum percoquatur. nonnulli et tus masculum admiscent. lavatur autem aerugo sicut cadmea. vis eius collyriis oculorum aptissima et delacrimationibus mordendo proficiens, sed ablui necessarium penicillis calidis, donec rodere desinat.

114 XXVII. Hieracium vocatur collyrium, quod ea[3] maxime constat. temperatur autem id ham-

[1] *seclud.* id *K. C. Bailey.*
[2] *V.l.* adulteratam.
[3] ea *Mayhoff*: illa *quidam apud Dalecamp*: ita.

[a] Used for colouring leather. The term probably includes both green vitriol or ferrous sulphate, which is our copperas, and blue vitriol, or cupric sulphate.
[b] This is not true.
[c] Or sponges.
[d] As K. C. Bailey rightly says, not *sal Hammoniacus* (a

prefer to grind copper filings mixed with vinegar in copper mortars. But the quickest result is obtained by adding to the vinegar shavings of coronet copper. Rhodian verdigris is adulterated chiefly with pounded marble, though others use pumicestone or gum. But the adulteration of verdigris that is the most difficult to detect is done with shoemakers' black,[a] the other adulterations being detected by the teeth as they crackle when chewed. Verdigris can be tested on a hot fire-shovel, as a specimen that is pure keeps [b] its colour, but what is mixed with shoemakers' black turns red. It is also detected by means of papyrus previously steeped in an infusion of plantgall, as this when smeared with genuine verdigris at once turns black. It can also be detected by the eye, as it has an evil green colour. But whether pure or adulterated, the best way is to wash it and when it is dry to burn it on a new pan and keep turning it over till it becomes glowing ashes; and afterwards it is crushed and put away in store. Some people burn it in raw earthenware vessels till the earthenware is baked through; some mix in also some male frankincense. Verdigris is washed in the same way as *cadmea*. § 106.
Its powerfulness is very well suited for eye-salves and its mordant action makes it able to produce watering at the eyes; but it is essential to wash it off with swabs [c] and hot water till its bite ceases to be felt.

XXVII. Hierax's Salve is the name given to an eye-salve chiefly composed of verdigris. It is made by mixing together four ounces of gum of Hammon,[d]

variety of common salt, which itself is not sal ammoniac = ammonium chloride).

moniaci unciis IIII, aeruginis Cypriae II, atramenti sutorii, quod chalcanthum vocant, totidem, misyos una, croci VI. haec omnia trita aceto Thasio colliguntur[1] in pilulas, excellentis remedii contra initia glaucomatum et suffusionum, contra caligines aut scabritias et albugines et genarum vitia. cruda
115 autem aerugo volnerariis emplastris miscetur. oris etiam gingivarumque exulcerationes mirifice emendat et labrorum ulcera cum oleo. quod si et cera addatur, purgat et ad cicatricem perducit. aerugo et callum fistularum erodit vitiorumque circa sedem sive per se sive cum hammoniaco inlita vel collyrii modo in fistulas adacta. eadem cum resinae terebinthinae tertia parte subacta lepras tollit.

116 XXVIII. Est et alterum genus aeruginis, quam vocant scoleca, in Cyprio ⟨mortario Cyprio⟩[2] aere trito[3] alumine et sale aut nitro pari pondere cum aceto albo quam acerrimo. non fit hoc nisi aestuosissimis[4] diebus circa canis ortum. teritur autem, donec viride fiat contrahatque se vermiculorum specie, unde et nomen. quod vitiatum[5] ut emendetur, II partes quam fuere aceti miscentur urinae pueri inpubis. idem autem in medicamentis et santerna efficit, qua diximus aurum feruminari. usus utriusque qui

[1] collinuntur *B*.
[2] ⟨mortario Cyprio⟩ *coni. Mayhoff*.
[3] trito *B*: intrito *cd. Flor. Ricc.*: hic trito *rell.*: hoc t. *edd. vett.*
[4] aestivosissimis *B*.
[5] vitiatum *Mayhoff*: vitium.

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[a] Copper pyrites.
[b] See pp. 210–1, note [d].
[c] This sentence is probably defective.

two of Cyprian verdigris, two of the copperas called flower of copper, one of *misy* [a] and six of saffron; all these ingredients are pounded in Thasian vinegar and made up into pills, that are an outstanding specific against incipient glaucoma and cataract, and also against films on the eyes or roughnesses and white ulcerations in the eye and affections of the eyelids. Verdigris in a crude state is used as an ingredient in plasters for wounds also. In combination with oil it is a marvellous cure for ulcerations of the mouth and gums and for sore lips, and if wax is also added to the mixture it cleanses them and makes them form a cicatrix. Verdigris also eats away the callosity of fistulas and of sores round the anus, either applied by itself or with gum of Hammon,[b] or inserted into the fistula in the manner of a salve. Verdigris kneaded up with a third part of turpentine also removes leprosy.

XXVIII. There is also another kind of verdigris called from the Greek worm-like verdigris, made by grinding up in a mortar of true cyprian copper with a pestle of the same metal equal weights of alum and salt or soda with the very strongest white vinegar. This preparation is only made on the very hottest days of the year, about the rising of the Dogstar. The mixture is ground up until it becomes of a green colour and shrivels into what looks like a cluster of small worms, whence its name. To remedy any that is blemished, the urine of a young boy to twice the quantity of vinegar that was used is added to the mixture.[c] Used as a drug, worm-verdigris has the same effect as santerna which we spoke of as used for xxxiii.
soldering gold; both of them have the same 93.
properties as verdigris. Native worm-verdigris is

aeruginis. scolex fit et per se derasus aerario lapidi, de quo nunc dicemus.

117 XXIX. Chalcitim vocant, ex quo et ipso aes coquitur. distat a cadmea, quod illa super terram ex subdialibus petris caeditur, haec ex obrutis, item quod chalcitis friat se statim, mollis natura, ut videatur lanugo concreta. est et alia distinctio, quod chalcitis tria genera continet, aeris et misyos et soreos, de quibus singulis dicemus suis locis.
118 habet autem aeris venas oblongas. probatur mellei coloris, gracili venarum discursu, friabilis nec lapidosa. putant et recentem utiliorem esse, quoniam inveterata sori fiat. vis[1] eius ad excrescentia in ulceribus, sanguinem sistere, gingivas, uvam, tonsillas farina compescere, volvae vitiis in vellere imponi. cum suco vero porri verendorum additur
119 emplastris. maceratur autem in fictili ex aceto circumlito fimo diebus XL, et colorem croci trahit. tum admixto cadmeae pari pondere medicamentum efficit psoricon dictum. quod si II partes chalcitidis tertia cadmeae temperentur, acrius hoc idem fiat; etiamnum vehementius, si aceto quam vino[2] temperetur; tosta vero efficacior fit ad eadem omnia.

120 XXX. Sori Aegyptium maxime laudatur, multum

[1] usus *coni. Mayhoff.* [2] ⟨si⟩ vino *coni. Mayhoff.*

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[a] Copper pyrites in process of decomposition. For *cadmea* see §§ 2 and 100 and notes.

[b] Copper pyrites.

[c] Probably decomposing marcasite, or sometimes black porous limestone with decomposing pyrites in it (K. C. Bailey).

also obtained by scraping a copper ore of which we shall now speak.

XXIX. Chalcitis, 'copper-stone,' is the name of an ore,[a] that from which copper also, besides *cadmea*, is obtained by smelting. It differs from *cadmea* because the latter is quarried above ground, from rocks exposed to the air, whereas chalcitis is obtained from underground beds, and also because chalcitis becomes immediately friable, being of a soft nature, so as to have the appearance of congealed down. There is also another difference in that chalcitis contains three kinds of mineral, copper, *misy* [b] and *sori*,[c] each of which we shall describe in its place; and the veins of copper in it are of an oblong shape. The approved variety of chalcitis is honey coloured, and streaked with fine veins, and is friable and not stony. It is also thought to be more useful when fresh, as when old it turns into *sori*. It is used for growths in ulcers, for arresting hæmorrhage and, in the form of a powder, for acting as an astringent on the gums, uvula and tonsils, and, applied in wool, as a pessary for affections of the uterus, while with leek juice it is employed in plasters for the genitals. It is steeped for forty days in vinegar in an earthenware jar, covered with dung, and then assumes the colour of saffron; then an equal weight of *cadmea* is mixed with it and this produces the drug called psoricon or cure for itch. If two parts of chalcitis are mixed with one of *cadmea* this makes a stronger form of the same drug, and moreover it is more violent if it is mixed in vinegar than if in wine; and when roasted it becomes more effective for all the same purposes.

Chalcitis.

§§ 120, 121.

XXX. Egyptian *sori* is most highly commended,

Sori.

superato Cyprio Hispaniensique et Africo, quamquam oculorum curationi quidam utilius putent Cyprium; sed in quacumque natione optimum cui maximum virus olfactu, tritumque pinguiter nigrescens et spongiosum. stomacho res contraria in tantum, ut quibusdam olfactum modo vomitiones moveat. et Aegyptium quidem tale,[1] alterius nationis contritum splendescit ut misy et est lapidosius. prodest autem et dentium dolori, si contineatur atque colluat, et ulceribus oris gravibus quaeque serpant. uritur carbonibus ut chalcitis.

121 XXXI. Misy aliqui tradiderunt fieri exusto lapide in scrobibus, flore eius luteo miscente se ligni pineae favillae. re vera autem e supra dicto fit lapide, concretum natura discretumque vi, optimum in Cypriorum officinis, cuius notae sunt friati aureae scintillae et, cum teratur, harenosa natura sine terra,[2] chalcitidi[3] dissimilis.[4] hoc admiscent qui aurum purgant. utilitas eius infusi cum rosaceo auribus purulentis et in lana inpositi capitis ulceribus. extenuat et scabritias oculorum inveteratas, praecipue
122 utile tonsillis contraque anginas et suppurata. ratio

[1] tale est *cd. deperd. Dalecamp.*
[2] terrae *cd. Vind.*: terrea *ed. Lugd.*
[3] chalcitidis *cd. Flor. Ricc.*
[4] dissimilis *K. C. Bailey*: simis *cd. Flor. Ricc.*: sin *B*[1]: sive *cd. Par.* 6801: similis *rell.*

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[a] Probably produced in most cases by sulphuretted hydrogen.
[b] Of hollow teeth, as is clear from the context and from Diosc. I, 141, V, 119.
[c] *Chalcitis*, § 117.

being far superior to that of Cyprus and Spain and Africa, although some people think that Cyprus *sori* is more useful for treatment of the eyes; but whatever its provenance the best is that which has the most pungent odour,[a] and which when ground up takes a greasy, black colour and becomes spongy. It is a substance that goes against the stomach so violently that with some people the mere smell of it causes vomiting. This is a description of the *sori* of Egypt. That from other sources when ground up turns a bright colour like *misy*, and it is harder; however, if it is held in the cavities[b] and used plentifully as a mouth-wash it is good for toothache and for serious and creeping ulcers of the mouth. It is burnt on charcoal, like chalcitis.

XXXI. Some people have reported that *misy* is made by burning mineral in trenches, its fine yellow powder mixing itself with the ash of the pine wood burnt; but as a matter of fact though got from the mineral[c] above mentioned, it is part of its substance and separated from it by force, the best kind being obtained in the copper-factories of Cyprus, its marks being that when broken it sparkles like gold and when it is ground it has a sandy appearance, without earth, unlike chalcitis. A mixture of *misy* is employed in the magical purification of gold.[d] Mixed with oil of roses it makes a useful infusion for suppurating ears and applied on wool a serviceable plaster for ulcers of the head. It also reduces chronic roughness of the eyelids, and is especially useful for the tonsils and against quinsy and suppura- *Misy.*

[d] The process of counteracting the supposed evil influence of gold when held over the head of children, etc. See XXXIII 84.

ut xvi drachmae in hemina aceti coquantur addito melle, donec lentescat. sic ad supra dicta utile est. quotiens opus sit molliri vim eius, mel adspergitur. erodit et callum fistularum ex aceto foventium et collyriis additur, sistit et sanguinem ulceraque quae serpant quaeve putrescant, absumit et excrescentes carnes. peculiariter virilitatis vitiis utile et feminarum profluvium sistit.

123 XXXII. Graeci cognationem aeris nomine fecerunt et atramento sutorio; appellant enim chalcanthon. nec ullius aeque mira natura est. fit in Hispaniae puteis stagnisve id genus aquae habentibus. decoquitur ea admixta dulci pari mensura et in piscinas ligneas funditur. immobilibus[1] super has transtris dependent restes lapillis extentae, quibus adhaerescens limus vitreis acinis imaginem quandam uvae reddit. exemptum ita siccatur diebus xxx. color est caeruleus perquam spectabili nitore, vitrumque
124 esse creditur; diluendo fit atramentum tinguendis coriis. fit et pluribus modis: genere terrae eo in scrobes cavato, quorum e lateribus destillantes hiberno gelu stirias stalagmian vocant, neque est purius aliud. sed ex eo, candidum colorem sentiente
125 viola, lonchoton[2] appellant. fit et in saxorum

[1] immobilibus *edd. vett.*: immobilis.
[2] *V.l.* locoton: leucoïon *Hermolaus Barbarus*: leucanthon *edd. vett.*

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[a] See n. [a] on § 112.
[b] *I.e.* water holding in solution the substance referred to.
[c] So Diosc. V, 114. But the description suggests 'leucoion,' 'violet-white.' The ancient like the modern violas were of various colours.

tions. The method is to boil 16 drams of it in a twelfth of a pint of vinegar with honey added till it becomes of a viscous consistency: this makes a useful preparation for the purposes above mentioned. When it is necessary to make it softer, honey is sprinkled on it. It also removes the callosity of fistulous ulcers when the patients use it with vinegar as a fomentation; and it is used as an ingredient in eye-salves, arrests hæmorrhage and creeping or putrid ulcers, and reduces fleshy excrescences. It is particularly useful for troubles in the sexual organs in the male, and it checks menstruation.

XXXII. The Greeks by their name for shoemakers'-black [a] have made out an affinity between it and copper: they call it *chalcanthon*, 'flower of copper'; and there is no substance that has an equally remarkable nature. It occurs in Spain in wells or pools that contain that sort of water.[b] This water is boiled with an equal quantity of pure water and poured into wooden tanks. Over these are firmly fixed cross-beams from which hang cords held taut by stones, and the mud clinging to the cords in a cluster of glassy drops has somewhat the appearance of a bunch of grapes. It is taken off and then left for thirty days to dry. Its colour is an extremely brilliant blue, and it is often taken for glass; when dissolved it makes a black dye used for colouring leather. It is also made in several other ways: earth of the kind indicated is hollowed into trenches, droppings from the sides of which form icicles in a winter frost which are called drop-flower of copper, and this is the purest kind. But some of it, violet with a touch of white, is called *lonchoton*, 'lance-headed.'[c] It is also made in pans hollowed

Shoemakers' black.

catinis pluvia aqua conrivato limo gelante; fit et salis modo flagrantissimo sole admissas dulces aquas cogente. ideo quidam duplici differentia fossile aut facticium appellant, hoc pallidus et quantum

126 colore, tantum bonitate deterius. probant maxime Cyprium in medicinae usu. sumitur ad pellenda ventris animalia drachmae pondere cum melle. purgat et caput dilutum ac naribus instillatum, item stomachum cum melle aut aqua mulsa sumptum. medetur et oculorum scabritiae dolorique et caligini et oris ulceribus. sistit et sanguinem narium, item haemorroidum. extrahit ossa fracta cum semine hyoscyami. suspendit epiphoras penicillo fronti inpositum, efficax et in emplastris ad purganda

127 volnera[1] et excrescentia ulcerum. tollit et uvas, vel si decocto tangantur, cum lini quoque semine superponitur emplastris ad dolores tollendos. quod ex eo candicat, in uno usu praefertur violaceis, ut gravitati aurium per fistulas inspiretur. volnera per se inlitum sanat, sed tinguit[2] cicatrices. nuper inventum ursorum in harena et leonum ora spargere illo, tantaque est vis in adstringendo, ut non queant mordere.

128 XXXIII. Etiamnum in aerariis reperiuntur quae

[1] *V.l.* ulcera.
[2] *V.l.* tingit: stringit *Caesarius.*

[a] Zinc oxide.
[b] Zinc oxide made impure by charcoal-dust and from other causes (K. C. Bailey).

in the rocks, into which the slime is carried by rain-water and freezes, and it also forms in the same way as salt when very hot sunshine evaporates the fresh water let in with it. Consequently some people distinguish in twofold fashion between the mined flower of copper and the manufactured, the latter paler than the former and as much inferior in quality as in colour. That which comes from Cyprus is most highly approved for medical employment. It is taken to remove intestinal worms, the dose being one dram mixed with honey. Diluted and injected as drops into the nostrils it clears the head, and likewise taken with honey or honey-water it purges the stomach. It is given as a medicine for roughness of the eyes, pain and mistiness in the eyes, and ulceration of the mouth. It stops bleeding from the nostrils, and also hæmorrhoidal bleeding. Mixed with henbane seed it draws out splinters of broken bones; applied to the forehead with a swab it arrests running of the eyes; also used in plasters it is efficacious for cleansing wounds and gatherings of ulcers. A mere touch of a decoction of it removes swellings of the uvula, and it is laid with linseed on plasters used for relieving pains. The whitish part of it is preferred to the violet kinds for one purpose, that of being blown through tubes into the ears to relieve ear-trouble. Applied by itself as a liniment it heals wounds, but it leaves a discoloration in the scars. There has lately been discovered a plan of sprinkling it on the mouths of bears and lions in the arena, and its astringent action is so powerful that they are unable to bite.

XXXIII. The substances called by Greek names meaning 'bubble'[a] and 'ash'[b] are also found in *Zinc oxide.*

vocant pompholygem et spodon. differentia, quod pompholyx lotura separatur, spodos inlota est. aliqui quod sit candidum levissimumque pompholygem dixere et esse aeris ac cadmeae favillam, spodon nigriorem esse ponderosioremque, derasam parietibus fornacium, mixtis scintillis,[1] aliquando et carbonibus.
129 haec aceto accepto odorem aeris praestat et, si tangatur lingua, saporem horridum. convenit oculorum medicamentis, quibuscumque vitiis occurrens, et ad omnia quae spodos. hoc solum distat, quod huius elutior vis est. additur et in emplastra, quibus lenis refrigeratio quaeritur et siccatio. utilior ad omnia quae vino lota est.

130 XXXIV. Spodos Cypria optima. fit autem liquescentibus cadmea et aerario lapide. levissimum hoc est flaturae totius evolatque e fornacibus et tectis adhaerescit, a fuligine distans candore. quod minus candidum ex ea, inmaturae fornacis argumentum est; hoc quidam pompholygem vocant. quod vero rubicundius ex iis invenitur, acriorem vim habet et exulcerat adeo, ut, cum lavatur, si attigit oculos,
131 excaecet. est et mellei coloris spodos, in qua plurimum aeris intellegitur. sed quodcumque genus lavando fit utilius; purgatur ante panno,[2] dein

[1] lapillis (*vel* cinere, pilis) *coni. Mayhoff.*

[2] linteo panno *coni. K. C. Bailey*: purgantur ramenta panno *D'Arcy Thompson*: ante pinna *aut* ante penna.

the furnaces of copper works. The difference between them is that bubble is disengaged by washing but ash is not washed out. Some people have given the name of ' bubble ' to the substance that is white and very light in weight, and have said that it is the ashes of copper and *cadmea*, but that ' ash ' is darker and heavier, being scraped off the walls of furnaces, mixed with sparks from the ore and sometimes also with charcoal. This material when vinegar is applied to it gives off a smell of copper, and if touched with the tongue has a horrible taste. It is a suitable ingredient for eye medicines, remedying all troubles whatever, and for all the purposes for which ' ash ' is used; its only difference is that its action is less violent. It is also used as an ingredient for plasters employed to produce a gentle cooling and drying effect. It is more efficacious for all purposes when it is moistened with wine.

XXXIV. Cyprus ash is the best. It is produced when *cadmea* and copper ore are melted. The ash in question is the lightest part of the whole substance produced by blasting, and it flies out of the furnaces and adheres to the roof, being distinguished from soot by its white colour. Such part of it as is less white is an indication of inadequate firing; it is this that some people call ' bubble.' But the redder part selected from it has a keener force, and is so corrosive that if while it is being washed it touches the eyes it causes blindness. There is also an ash of the colour of honey, which is understood to indicate that it contains a large amount of copper. But any kind is made more serviceable by washing; it is first purified with a strainer of cloth and then given a more substantial washing, and the rough portions

crassiore[1] lotura digitis scabritiae excernuntur.[2] eximia[3] vis est eius, quae vino lavatur. est aliqua et in genere vini differentia. leni enim lota collyriis oculorum minus utilis putatur, eademque efficacior ulceribus, quae manent, vel oris, quae madeant, et omnibus medicamentis, quae parentur contra gan-
132 graenas. fit et in argenti fornacibus spodos, quam vocant Lauriotim.[a] utilissima autem oculis adfirmatur quae fiat in aurariis, nec in alia parte magis est vitae ingenia mirari. quippe ne quaerenda essent metalla, vilissimis rebus utilitates easdem excogitavit.
133 XXXV. Antispodon vocant cinerem fici arboris vel caprifici vel myrti foliorum cum tenerrimis ramorum partibus vel oleastri vel oleae vel cotonei mali vel lentisci, item ex moris immaturis, id est candidis, in sole arefactis vel e buxi coma aut pseudocypiri aut rubi aut terebinthi vel oenanthes. taurini quoque glutinis aut linteorum cinerem similiter pollere inventum est. uruntur omnia ea crudo fictili in fornacibus, donec figlina percoquantur.
134 XXXVI. In aerariis officinis et smegma[b] fit iam liquato aere ac percocto additis etiamnum carbonibus paulatimque accensis, ac repente vehementiore flatu

[1] crassiore *aut* crassior *cdd.* (crossiora *cd. Vind.*): crassiora *D'Arcy Thompson*: crebriore *coni. Mayhoff.*

[2] scabritiæ (scabritis scabritiae *B*) excernuntur *cdd.*: scabritiem exterunt *edd. vett.*: excernit *Caesarius.*

[3] eximia *Mayhoff* et media *B*: *om.* et *rell.*

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[a] So called from Laurium in Attica, where there are still silver mines.

[b] This word σμῆγμα can, it seems, be used not only for a detergent or cleansing agent, but also for the stuff removed

are picked out by the fingers. When it is washed with wine it is particularly powerful. There is also some difference in the kind of wine used, as when it is washed with weak wine it is thought to be less serviceable for eye-salves, and at the same time more efficacious for running ulcers or for ulcers of the mouth that are always wet and more useful for all the antidotes for gangrene. An ash called Lauriotis [a] is also produced in furnaces in which silver is smelted; but the kind said to be most serviceable for the eyes is that which is formed in smelting gold. Nor is there any other department in which the ingenuities of life are more to be admired, inasmuch as to avoid the need of searching for metals experience has devised the same utilities by means of the commonest things.

XXXV. The substance called in Greek 'antispodos' 'substitute ash' is the ash of the leaves of the figtree or wild fig or myrtle together with the tenderest parts of the branches, or of the wild olive or cultivated olive or quince or mastic and also ash obtained from unripe, that is still pale, mulberries, dried in the sun, or from the foliage of the box or mock-gladiolus, or bramble or turpentine-tree or œnanthe. The same virtues have also been found in the ash of bull-glue or of linen fabrics. All of these are burnt in a pot of raw earth heated in a furnace until the earthenware is thoroughly baked.

XXXVI. Also 'smegma' [b] is made in copper forges by adding additional charcoal when the copper has already been melted, and thoroughly fused, and gradually kindling it; and suddenly when a stronger blast is applied a sort of chaff of 'Smegma.'

by cleansing; so here it means floating impurities containing some copper (K. C. Bailey).

exspuitur aeris palea quaedam. solum, quo excipiatur, stratum esse debet marilla.[1]

135 XXXVII. Ab ea discernitur quam in isdem officinis diphrygem vocant Graeci ab eo, quod bis torreatur. cuius origo triplex. fieri enim traditur ex lapide pyrite cremato in caminis, donec excoquatur in rubricam. fit et in Cypro ex luto cuiusdam specus arefacto[2] prius, mox paulatim circumdatis sarmentis.[3] tertio fit modo in fornacibus aeris faece subsidente. differentia est, quod[4] aes ipsum in catinos defluit, scoria extra fornaces, flos supernatat, diphryges
136 remanent. quidam tradunt in fornacibus globos lapidis, qui coquatur, feruminari, circa hunc aes fervere, ipsum vero non percoqui nisi tralatum in alias fornaces, et esse nodum[5] quendam materiae; id, quod ex cocto supersit, diphryga vocari. ratio eius in medicina similis praedictis: siccare et excrescentia consumere ac repurgare. probatur lingua, ut eam siccet tactu statim saporemque aeris reddat.

137 XXXVIII. Unum etiamnum aeris miraculum non omittemus. Servilia familia inlustris in fastis trientem aereum pascit auro, argento, consumentem utrumque. origo atque natura eius incomperta mihi

[1] marilla *Ian* (*olim* marila): marili *B*: maxili *rell.*: maxilla *edd. vett.*: debet. Facile *Hermolaus Barbarus.*

[2] ⟨sole⟩ *vel* ⟨aere⟩ arefacto *coni. K. C. Bailey.*

[3] sarmentis ⟨accensis⟩ *coni. K. C. Bailey* s. ⟨ardentibus⟩ *coni. Warmington.*

[4] *V.l.* differentiae siquidem: differentia est quidem quod *edd. vett.*

[5] *V.l.* nudum: nucleum *coni. Mayhoff.*

copper spirts out. The floor on which it is received ought to be strewn with charcoal-dust.

Other impurities.

XXXVII. Distinguished from 'smegma' is the substance in the same forges called by the Greeks diphryx, from its being twice roasted. It comes from three different sources. It is said to be obtained from a mineral pyrites which is heated in furnaces till it is smelted into a red earth. It is also made in Cyprus from mud obtained from a certain cavern, which is first dried and then gradually has burning brushwood put round it. A third way of producing it is from the residue that falls to the bottom in copper furnaces; the difference is that the copper itself runs down into crucibles and the slag forms outside the furnace and the flower floats on the top, but the supplies of diphryx remain behind. Some people say that certain globules of stone that is being smelted in the furnaces become soldered together and round this the copper gets red hot, but the stone itself is not fused unless it is transferred into other furnaces, and that it is a sort of kernel of the substance, and that what is called diphryx is the residue left from the smelting. Its use in medicine is similar to that of the substances already described; to dry up moisture and remove excrescent growths and act as a detergent. It can be tested by the tongue—contact with it ought immediately to have a parching effect and impart a flavour of copper.

XXXVIII. We will not omit one further remarkable thing about copper. The Servilian family, famous in our annals, possesses a bronze $\frac{1}{3}$ *as* piece which it feeds with gold and silver and which consumes them both. Its origin and nature are un-

est. verba ipsa de ea re Messallae senis ponam: Serviliorum familia habet trientem sacrum, cui summa cum cura magnificentiaque sacra quotannis faciunt. quem ferunt alias crevisse, alias decrevisse videri et ex eo aut honorem aut deminutionem familiae significare.

138 XXXIX. Proxime indicari debent metalla ferri. optumo pessimoque vitae instrumento est,[1] siquidem hoc tellurem scindimus, arbores serimus, arbusta tondemus,[2] vites squalore deciso annis omnibus cogimus iuvenescere, hoc extruimus tecta, caedimus saxa, omnesque ad alios usus ferro utimur, sed eodem ad bella, caedes, latrocinia, non comminus solum, sed etiam missili volucrique, nunc tormentis excusso, nunc lacertis, nunc vero pinnato, quam sceleratissimam humani ingenii fraudem arbitror, siquidem, ut ocius mors perveniret ad hominem, alitem illam fecimus pinnasque ferro dedimus.
139 quam ob rem culpa eius non naturae fiat accepta. aliquot experimentis probatum est posse innocens esse ferrum. in foedere, quod expulsis regibus populo Romano dedit Porsina, nominatim comprehensum invenimus, ne ferro nisi in agri cultu uteretur. et tum [3] stilo osseo [4] scribere institutum vetustissimi auctores prodiderunt. Magni Pompei in tertio

[1] est *add. Mayhoff.*
[2] *V.l.* ponemus (p. pomaria *cd. Flor. Ricc. ut videtur*: ponimus p. *edd. vett.*).
[3] *V.l.* cum.
[4] osseo *add. Mayhoff coll. Isid.* VI. 9. 2.

known to me, but I will put down the actual words of the elder Messala [a] on the subject. 'The family of the Servilii has a holy coin to which every year they perform sacrifices with the greatest devotion and splendour; and they say that this coin seems to have on some occasions grown bigger and on other occasions smaller, and that thereby it portends either the advancement or the decadence of the family.'

XXXIX. Next an account must be given of the mines and ores of iron. Iron serves as the best and the worst part of the apparatus of life, inasmuch as with it we plough the ground, plant trees, trim the trees that prop our vines, force the vines to renew their youth yearly by ridding them of decrepit growth; with it we build houses and quarry rocks, and we employ it for all other useful purposes, but we likewise use it for wars and slaughter and brigandage, and not only in hand-to-hand encounters but as a winged missile, now projected from catapults, now hurled by the arm, and now actually equipped with feathery wings, which I deem the most criminal artifice of man's genius, inasmuch as to enable death to reach human beings more quickly we have taught iron how to fly and have given wings to it. Let us therefore debit the blame not to Nature, but to man. A number of attempts have been made to enable iron to be innocent. We find it an express provision included in the treaty granted by Porsena to the Roman nation after the expulsion of the kings that they should only use iron for purposes of agriculture; and our oldest authors have recorded that in those days it was customary to write with a bone pen. There is extent an edict of Pompey the Great dated

Iron. Its uses and misuses.

508 B.C.

510 B.C.

[a] Consul in 53 B.C.

consulatu extat edictum in tumultu necis Clodianae prohibentis ullum telum esse in urbe.

140 XL. Et ars antiqua[1] ipsa non defuit honorem mitiorem habere ferro quoque. Aristonidas artifex, cum exprimere vellet Athamantis furorem Learcho filio praecipitato residentem paenitentia, aes ferrumque miscuit, ut robigine eius per nitorem aeris relucente exprimeretur verecundiae rubor. hoc
141 signum exstat hodie Rhodi.[2] est in eadem urbe et ferreus Hercules, quem fecit Alcon laborum dei patientia inductus. videmus et Romae scyphos e ferro dicatos in templo Martis Ultoris. obstitit eadem naturae benignitas exigentis ab ferro ipso poenas robigine eademque providentia nihil in rebus mortalius[3] facientis[4] quam quod esset infestissimum mortalitati.

142 XLI. Ferri metalla ubique propemodum reperiuntur, quippe et iam[5] insula Italiae Ilva gignente, minimaque difficultate adgnoscuntur colore ipso terrae manifesto. ratio eadem excoquendis venis; in Cappadocia tantum quaestio est, aquae an terrae fiat acceptum, quoniam perfusa Ceraso[6] fluvio terra neque aliter ferrum e fornacibus reddit.
143 differentia ferri numerosa. prima in genere terrae caelive: aliae molle tantum plumboque vicinum

[1] ars antiqua *Mayhoff*: tamen uiquea *B* (t. uique *B*²): tamen vita *rell.*

[2] hodie rhodi *B*: hodierno die *rell.*: h.d. Thebis *Hardouin*: Thebis hodie *Hermolaus Barbarus.*

[3] mortalius *B*: mortalibus *rell.*

[4] facientis *cd. deperd. Dalecamp*: faciente (facientem *cd. Par.* 6801, *cd. Leid. Voss.*).

[5] et iam *K. C. Bailey*: etiam.

[6] Ceraso *Urlichs*: certo.

in his third consulship at the time of the disorders accompanying the death of Clodius, prohibiting the possession of any weapon in the city. 52 B.C.

XL. Further, the art of former days did not fail to provide a more humane function even for iron. When the artist Aristonidas desired to represent the madness of Athamas subsiding in repentance after he had hurled his son Learchus from the rock, he made a blend of copper and iron, in order that the blush of shame should be represented by rust of the iron shining through the brilliant surface of the copper; this statue is still standing at Rhodes. There is also in the same city an iron figure of Heracles, which was made by Alcon, prompted by the endurance displayed by the god in his labours. We also see at Rome goblets of iron dedicated in the temple of Mars the Avenger. The same benevolence of nature has limited the power of iron itself by inflicting on it the penalty of rust, and the same foresight by making nothing in the world more mortal than that which is most hostile to mortality.

Iron ores and smelting. Steel.

XLI. Deposits of iron are found almost everywhere, and they are formed even now in the Italian island of Elba, and there is very little difficulty in recognizing them as they are indicated by the actual colour of the earth. The method of melting out the veins is the same as in the case of copper. In Cappadocia alone it is merely a question whether the presence of iron is to be credited to water or to earth, as that region supplies iron from the furnaces when the earth has been flooded by the river Cerasus but not otherwise. There are numerous varieties of iron; the first difference depending on the kind of soil or of climate—some lands only yield a soft iron

subministrant, aliae fragile et aerosum rotarumque usibus et clavis maxime fugiendum, cui prior ratio convenit; aliud brevitate sola[1] placet clavisque caligariis, aliud robiginem celerius sentit. stricturae vocantur hae omnes, quod non in aliis metallis, a
144 stringenda acie vocabulo inposito. et fornacium magna differentia est, nucleusque quidam ferri excoquitur in iis ad indurandam aciem, alioque modo ad densandas incudes malleorumve rostra. summa autem differentia in aqua, cui subinde candens inmergitur. haec alibi atque alibi utilior nobilitavit loca gloria ferri, sicuti Bilbilim in Hispania et Turiassonem, Comum in Italia, cum ferraria metalla in iis
145 locis non sint. ex omnibus autem generibus palma Serico ferro est; Seres hoc cum vestibus suis pellibusque mittunt; secunda Parthico. neque alia genera ferri ex mera[2] acie temperantur, ceteris enim admiscetur mollior complexus. in nostro orbe aliubi vena bonitatem hanc praestat, ut in Noricis, aliubi factura, ut Sulmone, aqua aliubi ut[3] diximus, quippe cum[4] exacuendo oleariae cotes aquariaeque
146 differant et oleo delicatior fiat acies. tenuiora ferra-

[1] bonitate soleis *K. C. Bailey*.
[2] ex mera *B*: ex mira *rell.* (ex nimia *cd. Vind.* CCXXXIV): eximia *edd. vett.*
[3] aliubi ut *Warmington*: uti *edd. vett.*: ubi.
[4] *V.l.* cum in.

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[a] The Chinese; in fact intermediaries are meant.
[b] In the MSS. this sentence comes after the next one.

closely allied to lead, others a brittle and coppery kind that is specially to be avoided for the requirements of wheels and for nails, for which purpose the former quality is suitable; another variety of iron finds favour in short lengths only and in nails for soldiers' boots; another variety experiences rust more quickly. All of these are called 'stricturae,' 'edging ores,' a term not used in the case of other metals; it is, as assigned to these ores, derived from *stringere aciem*, 'to draw out a sharp edge.' There is also a great difference between smelting works, and a certain knurr of iron is smelted in them to give hardness to a blade, and by another process to giving solidity to anvils or the heads of hammers. But the chief difference depends on the water in which at intervals the red hot metal is plunged; the water in some districts is more serviceable than in others, and has made places famous for the celebrity of their iron, for instance Bambola and Tarragona in Spain and Como in Italy, although there are no iron mines in those places. But of all varieties of iron the palm goes to the Seric, sent us by the Seres[a] with their fabrics and skins. The second prize goes to Parthian iron; and indeed no other kinds of iron are forged from pure metal, as all the rest have a softer alloy welded with them. In our part of the world, in some places the lode supplies this good quality, as for instance in the country of the Norici, in other places it is due to the method of working, as at Sulmona, and in others, as we have said, it is due § 144.
to the water; inasmuch as for giving an edge there is a great difference between oil whetstones and water whetstones, and a finer edge is produced by oil. It[b] is the custom to quench smaller iron forgings

menta oleo restingui mos est, ne aqua in fragilitatem durentur.[1] mirumque, cum excoquatur vena, aquae modo liquari ferrum, postea in spongeas frangi. a ferro sanguis humanus se ulciscitur, contactum namque eo celerius robiginem trahit.

147 XLII. De magnete lapide suo loco dicemus concordiaque, quam cum ferro habet. sola haec materia virus [2] ab eo lapide accipit retinetque longo tempore, aliud adprehendens ferrum, ut anulorum catena spectetur interdum. quod volgus imperitum appellat ferrum vivum, vulneraque talia asperiora
148 fiunt. hic lapis et in Cantabria nascitur, non ut ille magnes verus caute continua, sed sparsa bullatione [3]—ita appellant,—nescio an vitro [4] fundendo perinde utilis, nondum enim expertus est quisquam; ferrum utique inficit eadem vi. Magnete lapide architectus Timochares Alexandriae Arsinoes templum concamarare incohaverat, ut in eo simulacrum e ferro pendere in aëre videretur. intercessit ipsius mors et Ptolemaei regis, qui id sorori suae iusserat
149 fieri. XLIII. Metallorum omnium vena ferri largissima est. Cantabriae maritima parte, qua oceanus adluit, mons praealtus—incredibile dictu—totus ex ea materia est, ut in ambitu oceani diximus.

[1] tenuiora . . . durentur *post* acies *transf. Rackham*: *post* frangi *habent cdd.*
[2] *V.l.* vires (vim *Isid.* XVI. 21. 4).
[3] bulbatione *B*: bullatione *rell.*
[4] vitro *Hermolaus Barbarus*: ultro.

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[a] As well as in Magnesia.
[b] Wife of Ptolemy II, Philadelphus King of Egypt 286–247 B.C.
[c] Pliny has not stated this anywhere else. But *cf.* IV. 112.

with oil, for fear that water might harden them and make them brittle. And it is remarkable that when a vein of ore is fused the iron becomes liquid like water and afterwards acquires a spongy and brittle texture. Human blood takes its revenge from iron, as if iron has come into contact with it, it becomes the more quickly liable to rust.

XLII. We will speak in the appropriate place about the lode-stone and the sympathy which it has with iron. Iron is the only substance that catches the infection of that stone and retains it for a long period, taking hold of other iron, so that we may sometimes see a chain of rings; the ignorant lower classes call this 'live iron,' and wounds inflicted with it are more severe. This sort of stone forms in Biscaya also [a] not in a continuous rocky stratum like the genuine lodestone alluded to but in a scattered pebbly formation or 'bubbling'—that is what they call it. I do not know whether it is equally useful for glass founding, as no one has hitherto tested it, but it certainly imparts the same magnetic property to iron. The architect Timochares had begun to use lodestone for constructing the vaulting in the Temple of Arsinoe [b] at Alexandria, so that the iron statue contained in it might have the appearance of being suspended in mid air; but the project was interrupted by his own death and that of King Ptolemy who had ordered the work to be done in honour of his sister.

Lode-stone. XXXVI, 126 *sqq.*

XLIII. Iron ore is found in the greatest abundance of all metals. In the coastal part of Biscaya washed by the Atlantic there is a very high mountain which, marvellous to relate, consists entirely of that mineral, as we stated [c] in our account of the lands bordering on the Ocean.

Ferrum accensum igni, nisi duretur ictibus, corrumpitur. rubens non est habile tundendo neque antequam albescere incipiat. aceto aut alumine
150 inlitum fit aeri simile. a robigine vindicatur cerussa et gypso et liquida pice. haec est ferro a Graecis antipathia dicta. ferunt quidem et religione quadam id fieri et exstare ferream catenam apud Euphraten amnem in urbe, quae Zeugma appellatur, qua Alexander Magnus ibi iunxerit pontem, cuius anulos, qui refecti sint, robigine infestari, carentibus ea prioribus.

151 XLIV. Medicina e ferro est et alia quam secandi. namque et circumscribi circulo[1] terve circumlato mucrone et adultis et infantibus prodest contra noxia medicamenta, et praefixisse in limine evulsos sepulchris clavos adversus nocturnas lymphationes, pungique leviter mucrone, quo percussus homo sit, contra dolores laterum pectorumque subitos, qui punctionem adferant. quaedam ustione sanantur, privatim vero canis rabidi morsus, quippe etiam praevalente morbo expaventesque potum usta plaga ilico liberantur. calfit etiam ferro candente potus in multis vitiis, privatim vero dysentericis.

152 XLV. Est et robigo ipsa in remediis, et sic proditur

circulo *B*: circulos *rell.*

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[a] See § 175.
[b] Opposite the modern Birejik.

Iron that has been heated by fire is spoiled unless it is hardened by blows of the hammer. It is not suitable for hammering while it is red hot, nor before it begins to turn pale. If vinegar or alum is sprinkled on it it assumes the appearance of copper. It can be protected from rust by means of lead acetate,[a] gypsum and vegetable pitch; rust is called by the Greeks 'antipathia,' 'natural opposite' to iron. It is indeed said that the same result may also be produced by a religious ceremony, and that in the city called Zeugma[b] on the river Euphrates there is an iron chain that was used by Alexander the Great in making the bridge at that place, the links of which 331 B.C. that are new replacements are attacked by rust although the original links are free from it.

Medicinal uses of iron.

XLIV. Iron supplies another medicinal service besides its use in surgery. It is beneficial both for adults and infants against noxious drugs for a circle to be drawn round them with iron or for a pointed iron weapon to be carried round them; and to have a fence of nails that have been extracted from tombs driven in in front of the threshold is a protection against attacks of nightmare, and a light prick made with the point of a weapon with which a man has been wounded is beneficial against sudden pains which bring a pricking sensation in the side and chest. Some maladies are cured by cauterization, but particularly the bite of a mad dog, inasmuch as even when the disease is getting the upper hand and when the patients show symptoms of hydrophobia they are relieved at once if the wound is cauterized. In many disorders, but especially in dysenteric cases, drinking water is heated with redhot iron.

XLV. The list of remedies even includes rust

Telephum sanasse Achilles, sive id aerea sive ferrea cuspide fecit; ita certe pingitur ex ea decutiens gladio suo.[1] robigo ferri deraditur umido ferro
153 clavis veteribus. potentia eius ligare, siccare, sistere. emendat alopecias inlita. utuntur et ad scabritias genarum pusulasque totius corporis cum cera et myrteo oleo, ad ignes vero sacros ex aceto, item ad scabiem, paronychia digitorum et pterygia in linteolis. sistit et feminarum profluvia inposita in vellere, utilis[2] plagis quoque recentibus vino diluta et cum murra subacta, condylomatis ex aceto. podagras quoque inlita lenit.

154 XLVI. Squama quoque ferri in usu est ex acie aut mucronibus, maxime simili, sed acriore vi quam robigo, quam ob rem et contra epiphoras oculorum adsumitur. sanguinem sistit, cum volnera ferro maxime fiant! sistit et feminarum profluvia. inponitur et contra lienium vitia, et haemorroidas compescit ulcerumque serpentia. et genis prodest
155 farinae modo adspersa paullisper. praecipua tamen commendatio eius in hygremplastro ad purganda vulnera fistulasque et omnem callum erodendum et rasis ossibus carnes recreandas. componitur hoc modo: propolis[3] oboli VI, Cimoliae cretae drachmae VI, aeris tusi drachmae II, squamae ferri[4] totidem,

[1] suo *K. C. Bailey*: sed.

[2] in vellere, utilis *coni. Mayhoff*: velleribus.

[3] propolis *Mayhoff* (*coll.* XXII. 107, *Scribon.*, 209) *qui et* galbani *vel* panacis *coni.*: pal. *B*: pari *rell.*: panis *Ian*: aluminis *coni. Sillig*: picis *Hardouin.*

[4] *V.l.* ferreae.

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[a] Cf. XXXV, 195 ff.

itself, and this is the way in which Achilles is stated to have cured Telephus, whether he did it by means of a copper javelin or an iron one; at all events Achilles is so represented in painting, knocking the rust off a javelin with his sword. Rust of iron is obtained by scraping it off old nails with an iron tool dipped in water. The effect of rust is to unite wounds and dry them and staunch them, and applied as a liniment it relieves fox-mange. They also use it with wax and oil of myrtle for scabbiness of the eye-lids and pimples in all parts of the body, but dipped in vinegar for erysipelas and also for scab, and, applied on pieces of cloth, for hangnails on the fingers and whitlows. Applied on wool it arrests women's discharges and for recent wounds it is useful diluted with wine and kneaded with myrrh, and for swellings round the anus dipped in vinegar. Used as a liniment it also relieves gout.

XLVI. Scale of iron, obtained from a sharp edge or point, is also employed, and has an effect extremely like that of rust only more active, for which reason it is employed even for running at the eyes. It arrests hæmorrhage, though it is with iron that wounds are chiefly made! And it also arrests female discharges. It is also applied against troubles of the spleen, and it checks hæmorrhoidal swellings and creeping ulcers. Applied for a brief period in the form of a powder it is good for the eyelids. But its chief recommendation is its use in a wet plaster for cleaning wounds and fistulas and for eating out every kind of callosity and making new flesh on bones that have been denuded. The following are the ingredients: six obols of bee-glue, six drams of Cimolo earth,[a] two drams of pounded copper, two of

cerae x,[1] olei sextarius. his adicitur, cum sunt repurganda volnera aut replenda, ceratum.

156 XLVII. Sequitur natura plumbi, cuius duo genera, nigrum atque candidum. pretiosissimum in[2] hoc candidum, Graecis appellatum cassiterum fabuloseque narratum in insulas Atlantici maris peti vitilibusque navigiis et circumsutis corio advehi. nunc certum est in Lusitania gigni et in Gallaecia summa
157 tellure, harenosa et coloris nigri. pondere tantum ea deprehenditur; interveniunt et minuti calculi, maxime torrentibus siccatis. lavant eas harenas metallici et, quod subsedit, cocunt in fornacibus. invenitur et in aurariis metallis, quae alutias[3] vocant, aqua immissa eluente calculos nigros paullum candore variatos, quibus eadem gravitas quae auro, et ideo in catillis[4] quibus aurum colligitur, cum eo remanent; postea caminis separantur conflatique in plumbum
158 album resolvuntur. non fit in Gallaecia nigrum, cum vicina Cantabria nigro tantum abundet, nec ex albo argentum, cum fiat ex nigro. iungi inter se plumbum nigrum sine albo non potest nec hoc ei sine oleo ac ne album quidem secum sine nigro. album habuit auctoritatem et Iliacis temporibus teste
159 Homero, cassiterum ab illo dictum. plumbi nigri

[1] x *Mayhoff*: XL B^1: XI B^2: ex *aut* sex *rell.*
[2] in *add. Mayhoff.*
[3] alutias *B*: alutia *aut* aluta *rell.*
[4] catillis *Warmington*: scutulis *Urlichs*: calathis *cd. Par.* 6801 *recte?*: calatis *aut* colatis *aut* cloacis *rell.* (cutalis *B*).

[a] Pliny's 'black lead' is lead, and his 'white lead' is tin. Neither must be confused with the 'black lead' and 'white lead' of modern usage.
[b] Or, if we read *calathis*, 'baskets.'

scale of iron, ten of wax and a pint of oil. When it is desired to cleanse or fill up wounds, wax plaster is added to these ingredients.

Lead and tin. XLVII. The next topic is the nature of lead, of which there are two kinds, black and white.[a] White lead (tin) is the most valuable; the Greeks applied to it the name *cassiteros*, and there was a legendary story of their going to islands of the Atlantic ocean to fetch it and importing it in platted vessels made of osiers and covered with stitched hides. It is now known that it is a product of Lusitania and Gallaecia found in the surface-strata of the ground which is sandy and of a black colour. It is only detected by its weight, and also tiny pebbles of it occasionally appear, especially in dry beds of torrents. The miners wash this sand and heat the deposit in furnaces. It is also found in the goldmines called 'alutiæ,' through which a stream of water is passed that washes out black pebbles of tin mottled with small white spots, and of the same weight as gold, and consequently they remain with the gold in the bowls [b] in which it is collected, and afterwards are separated in the furnaces, and fused and melted into white lead. Black lead does not occur in Gallaecia, although the neighbouring country of Biscaya has large quantities of black lead only; and white lead yields no silver, although it is obtained from black lead. Black lead cannot be soldered with black without a layer of white lead, nor can white be soldered to black without oil, nor can even white lead be soldered with white without some black lead. Homer testifies that white lead or tin had a high position even in the Trojan period, he giving it the name of *cassiteros*. *Il.* XI, 25; XVIII, 568 574, 613; XXIII, 561. There are two different sources of black lead, as it is

origo duplex est; aut enim sua provenit vena nec quicquam aliud ex sese parit aut cum argento nascitur mixtisque venis conflatur. huius qui primus fuit in fornacibus liquor stagnum appellatur; qui secundus, argentum; quod remansit in fornacibus, galena, quae fit tertia portio additae venae; haec rursus conflata dat nigrum plumbum deductis partibus nonis II.

160 XLVIII. Stagnum inlitum aereis vasis saporem facit gratiorem ac compescit virus aeruginis, mirumque, pondus non auget. specula etiam ex eo laudatissima, ut diximus, Brundisi temperabantur, donec argenteis uti coepere et ancillae. nunc adulteratur stagnum addita aeris candidi tertia portione in plumbum album. fit et alio modo mixtis albi plumbi nigrique libris; hoc nunc aliqui argentarium appellant. iidem et tertiarium vocant, in quo duae sunt nigri portiones et tertia albi. pretium eius in libras X xx.[1] hoc fistulae solidantur.
161 inprobiores ad tertiarium additis partibus aequis albi argentarium vocant et eo quae volunt incoquunt. pretium[2] huius faciunt in p. X LXX.[3] albo per se sincero pretium[4] sunt X LXXX,[5] nigro X VII.[6]

Albi natura plus aridi habet, contraque nigri tota

[1] X XX *B*: XXX *rell.* (X.X *cd. Par. Lat.* 6797).
[2] *V.l.* pretia (pretio *cd. Leid. Voss.*).
[3] XLXX /// *B*[2]: *varia cdd.* [4] *V.l.* pretia.
[5] XLXXX *B*[2]: *varia cdd.*
[6] X.VII *cd. Chiffl. apud Dalecamp*: XVII *rell.*

[a] The mixture is *galena* or sulphide of lead, the commonest lead ore, for which, see XXXIII, 95.

[b] Or *stannum*, alloy of silver and lead.

[c] *Galena* is here crude or impure lead, not the modern galena or sulphide of lead, for which see XXXIII, 95.

[d] Brass.

either found in a vein of its own and produces no other substance mixed with it, or it forms together with silver, and is smelted with the two veins mixed together.[a] Of this substance the liquid that melts first in the furnaces is called *stagnum* [b]; the second liquid is argentiferous lead, and the residue left in the furnaces is impure lead [c] which forms a third part of the vein originally put in; when this is again fused it gives black lead, having lost two-ninths in bulk.

XLVIII. When copper vessels are coated with *stagnum* the contents have a more agreeable taste and the formation of destructive verdigris is prevented, and, what is remarkable, the weight is not increased. Also, as we have said, it used to be xxxiii, 130. employed at Brindisi as a material for making mirrors which were very celebrated, until even servant-maids began to use silver ones. At the present day a counterfeit *stagnum* is made by adding one part of white copper [d] to two parts of white lead; and it is also made in another way by mixing together equal weights of white and black lead: the latter compound some people now call 'silver mixture.' The same people also give the name of 'tertiary' to a compound containing two portions of black lead and one of white; its price is 20 denarii a pound. It is used for soldering pipes. More dishonest makers add to tertiary an equal amount of white lead and call it 'silver mixture,' and use it melted for plating by immersion any articles they wish. They put the price of this last at 70 denarii for 1 lb.: the price of pure white lead without alloy is 80 denarii, and of black lead 7 denarii.

The substance of white lead has more dryness,

umida est. ideo album nulli rei sine mixtura utile est. neque argentum ex eo plumbatur, quoniam
162 prius liquescat argentum, confirmantque, si minus albo nigri, quam satis sit, misceatur, erodi ab eo argentum. album incoquitur aereis operibus Galliarum invento ita, ut vix discerni possit ab argento, eaque incoctilia appellant. deinde et argentum incoquere simili modo coepere equorum maxime ornamentis iumentorumque ac iugorum in Alesia
163 oppido; reliqua gloria Biturigum fuit. coepere deinde et esseda sua colisataque ac petorita exornare simili modo, quae iam luxuria ad aurea quoque, non modo argentea, staticula [1] pervenit, quaeque in scyphis cerni prodigum [2] erat, haec in vehiculis adteri cultus vocatur.

plumbi albi experimentum in charta est, ut liquefactum pondere videatur, non calore, rupisse. India neque aes neque plumbum habet gemmisque ac margaritis suis haec permutat.

164 XLIX. Nigro plumbo ad fistulas lamnasque utimur, laboriosius in Hispania eruto totasque per Gallias, se din Brittannia summo terrae corio adeo large, ut lex interdicat ut [3] ne plus certo modo fiat. nigri

[1] vehicula *cd. Par.* 6801, *cd. Par. Lat.* 6797, *m.2 in ras.*
[2] *V.l.* prodigium.
[3] lex interdicat ut *M. Hertz*: lex ultro dicatur *cdd.*: lex cavere dicatur *Urlichs*: lex custodiatur *Detlefsen*: lege interdicatur *Brunn*: nec interdicatur *coni. Mayhoff.*

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[a] But silver does *not* melt sooner than 'white lead' (tin). Perhaps some alloy is meant here.
[b] At Mont Auxois near Alise.

whereas that of black lead is entirely moist. Consequently white lead cannot be used for anything without an admixture of another metal, nor can it be employed for soldering silver, because the silver melts before the white lead.[a] And it is asserted that if a smaller quantity of black lead than is necessary is mixed with the white, it corrodes the silver. A method discovered in the Gallic provinces is to plate bronze articles with white lead so as to make them almost indistinguishable from silver; articles thus treated are called 'incoctilia.' Later they also proceeded in the town Alesia [b] to plate with silver in a similar manner, particularly ornaments for horses and pack animals and yokes of oxen; the distinction of developing this method belongs to Bordeaux. Then they proceeded to decorate two-wheeled war-chariots, chaises and four-wheeled carriages in a similar manner, a luxurious practice that has now got to using not only silver but even gold statuettes, and it is now called good taste to subject to wear and tear on carriages ornaments that it was once thought extravagant to see on a goblet!

It is a test of white lead when melted and poured on papyrus to seem to have burst the paper by its weight and not by its heat. India possesses neither copper nor lead, and procures them in exchange for her precious stones and pearls.

XLIX. Black lead which we use to make pipes and sheets is excavated with considerable labour in Spain and through the whole of the Gallic provinces, but in Britain it is found in the surface-stratum of the earth in such abundance that there is a law prohibiting the production of more than a certain amount. The various kinds of black lead

generibus haec sunt nomina: Ovetanum,[1] Caprariense, Oleastrense, nec differentia ulla scoria modo excocta diligenter. mirum in his solis metallis, quod dere-
165 licta fertilius revivescunt. hoc videtur facere laxatis spiramentis ad satietatem infusus aër, aeque ut feminas quasdam fecundiores facere abortus. nuper id conpertum in Baetica Salutariensi [2] metallo, quod locari solitum X $\overline{\text{cc}}$ [3] annuis, postquam obliteratum erat, X $\overline{\text{ccLV}}$ [4] locatum est. simili modo Antonianum in eadem provincia pari locatione pervenit ad HS $\overline{\text{cccc}}$ vectigalis. mirum et addita aqua non liquescere vasa e plumbo, eadem, si in aquam [5] addantur calculus vel aereus quadrans, peruri.

166 L. In medicina per se plumbi usus cicatrices reprimere adalligatisque lumborum et renium parti lamnis frigidiore natura inhibere inpetus veneris visaque in quiete veneria sponte naturae erumpentia usque in genus morbi. his lamnis Calvus orator cohibuisse se traditur viresque corporis studiorum labori custodisse. Nero, quoniam ita placuit diis, princeps, lamna pectori inposita sub ea cantica exclamans alendis vocibus demonstravit rationem.
167 coquitur ad medicinae usus patinis fictilibus substrato sulpure minuto, lamnis impositis tenuibus

[1] Ovetanum *Hardouin*: iovetanum *B*: iovetantum *rell.*

[2] Salutariensi *coni. Mayhoff*: samariensi *B*: santarensi *aut* samiarenci *aut* saremianensi *rell.*

[3] $\overline{\text{cc}}$ *Ian*: cc. M. *cd. Leid. Voss., cd. Flor. Ricc.*[2] (ccc *Ricc.*[1]) : cc *rell.*

[4] X $\overline{\text{ccLV}}$ *Mayhoff*: *varia cdd. et edd.*

[5] in aquam *C. F. W. Müller*: sine aqua *K. C. Bailey*: *coni. Mayhoff* cum aqua.

[a] Not true. K. C. Bailey suggests *si sine aqua* and translates 'a hole is burnt in the same vessels if filled with pebbles or copper coins instead of water.'

have the following names—Oviedo lead, Capraria lead, Oleastrum lead, though there is no difference between them provided the slag has been carefully smelted away. It is a remarkable fact in the case of these mines only that when they have been abandoned they replenish themselves and become more productive. This seems to be due to the air infusing itself to saturation through the open orifices, just as a miscarriage seems to make some women more prolific. This was recently observed in the Salutariensian mine in Bætica, which used to be let at a rent of 200,000 denarii a year, but which was then abandoned, and subsequently let for 255,000. Likewise the Antonian mine in the same province from the same rent has reached a return of 400,000 sesterces. It is also remarkable that vessels made of lead will not melt if they have water put in them, but if to the water a pebble or quarter-*as* coin is added, the fire burns through [a] the vessel.

L. In medicine lead is used by itself to remove scars, and leaden plates are applied to the region of the loins and kidneys for their comparative chilly nature to check the attacks of venereal passions, and the libidinous dreams that cause spontaneous emissions to the extent of constituting a kind of disease. It is recorded that the pleader Calvus used these plates to control himself and to preserve his bodily strength for laborious study. Nero, whom heaven was pleased to make emperor, used to have a plate of lead on his chest when singing songs *fortissimo*, thus showing a method for preserving the voice. For medical purposes lead is melted in earthen vessels, a layer of finely powdered sulphur being put underneath it; on this thin plates are *Medical uses of lead.*

opertisque sulpure, veru ferreo[1] mixtis. cum coquatur,[2] munienda in eo opere foramina spiritus convenit; alioqui plumbi fornacium halitus noxius sentitur et pestilens; nocet[3] canibus ocissime, omnium vero metallorum muscis et culicibus, quam ob rem non sunt ea taedia in metallis.

168 Quidam in coquendo scobem plumbi lima quaesitam sulpuri miscent, alii cerussam potius quam sulpur. fit et lotura plumbi usus in medicina. cum se ipso teritur in mortariis plumbeis addita aqua caelesti, donec crassescat; postea supernatans aqua tollitur spongeis; quod crassissimum fuit, siccatum dividitur in pastillos. quidam limatum plumbum sic terunt, quidam et plumbaginem admiscent, alii vero acetum,
169 alii vinum, alii adipem, alii rosam. quidam in lapideo mortario et maxime Thebaico plumbum pistillo lapideo[4] terere malunt, candidiusque ita fit medicamentum. id autem quod ustum est plumbum lavatur ut stibis et cadmea. potest adstringere, sistere, contrahere cicatrices; usu est[5] eodem et in oculorum medicamentis, maxime contra procidentiam eorum et inanitates ulcerum excrescentiave rimasque sedis aut haemorroidas et con-
170 dylomata. ad haec maxime lotura plumbi facit,

[1] veru ferreo *coni. Mayhoff*: et ferro *aut* est et foro.
[2] coquuntur *coni. Mayhoff*.
[3] nocet *Warmington*: est *Mayhoff*: et.
[4] plumbum (*Urlichs*) pistillo (*e cd. Par. Lat.* 6797) lapideo (*coll. Diosc.*) *K. C. Bailey*: plumbeum pistillum *aut* plumbeo pistillum *cdd.* (pistillo *cd. Par. Lat.* 6797).
[5] usu est *Mayhoff*: usus et *cdd.*: usus enim ex *ed. vett.*: usus ex *Sillig*.

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[a] See XXXIII, 98. [b] See § 175.
[c] Not it seems the plant lead-wort. Cf. Dioscorides, V, 95, 100.

laid and covered with sulphur and stirred up with an iron spit. While it is being melted, the breathing passages should be protected during the operation, otherwise the noxious and deadly vapour of the lead furnace is inhaled: it is hurtful to dogs with special rapidity,[a] but the vapour of all metals is so to flies and gnats, owing to which those annoyances are not found in mines.

Some people during the process of smelting mix lead-filings with the sulphur, and others use lead acetate[b] in preference to sulphur. Another use of lead is to make a wash—it is employed in medicine—pieces of lead with rainwater added being ground against themselves in leaden mortars till the whole assumes a thick consistency, and then water floating on the top is removed with sponges and the very thick sediment left when dry is divided into tablets. Some people grind up lead filings in this way and some also mix in some lead ore,[c] but others use vinegar, others wine, others grease, others oil of roses. Some prefer to grind the lead with a stone pestle in a stone mortar, and especially one made of Thebes stone,[d] and this process produces a drug of a whiter colour. Calcined lead is washed like antimony and *cadmea*.[e] It has the property of acting as an astringent and arresting hæmorrhage and of promoting cicatrization. It is of the same utility also in medicines for the eyes, especially as preventing their procidence, and for the cavities or excrescences left by ulcers and for fissures of the anus or haemorrhoids and swellings of the anus. For these purposes lead lotion is ex-

[d] Cf. XXXIII, 68; XXXIV, 106; XXXVI, 63, 157.
[e] See XXXIII, 103; XXXIV, 100–104.

cinis autem usti ad serpentia ulcera aut sordida, eademque quae chartis[1] ratio profectus. uritur autem in patinis per lamnas minutas cum sulpure, versatum rudibus ferreis aut ferulaceis, donec liquor mutetur in cinerem; dein refrigeratum teritur in farinam. alii elimatam scobem in fictili crudo cocunt in caminis, donec percoquatur figlinum. aliqui cerussam admiscent pari mensura aut hordeum teruntque ut in crudo[2] dictum est, et praeferunt sic plumbum spodio Cyprio.

171 LI. Scoria quoque plumbi in usu est. optima quae maxime ad luteum colorem accedit, sine plumbi reliquiis aut sulpuris, specie terrae[3] carens. lavatur haec in mortariis minutim fracta, donec aqua luteum colorem trahat, et transfunditur in vas purum, idque saepius, usque dum subsidat quod utilissimum est. effectus habet eosdem quos plumbum, sed acriores. mirarique succurrit experientiam[4] vitae, ne faece quidem rerum excrementorumque foeditate intemptata tot modis.

172 LII. Fit et spodium ex plumbo eodem modo quo ex Cyprio aere; lavatur in linteis raris aqua caelesti separaturque terrenum transfusione; cribratum teritur. quidam pulverem eum pinnis digerere malunt ac terere in vino odorato.

[1] chalcitidis *coni. Mayhoff.*
[2] in crudo *cdd.*: supra *coni. K. C. Bailey.*
[3] specie terrae *B*: et terra *rell.*
[4] experientia *B.*

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[a] For the medicinal use of burnt papyrus see XXIV, 88.
[b] See § 175.
[c] Some kind of litharge.

tremely efficient, while for creeping or foul ulcers ash of calcined lead is useful; and the benefit they produce is on the same lines as in the case of sheets of papyrus.[a] The lead is burnt in small sheets mixed with sulphur, in shallow vessels, being stirred with iron rods or fennel stalks till the molten metal is reduced to ashes; then after being cooled off it is ground into powder. Another process is to boil lead filings in a vessel of raw earth in furnaces till the earthenware is completely baked. Some mix with it an equal amount of lead acetate[b] or of barley and grind this mixture, in the way stated in the case of § 163.
raw lead, and prefer the lead treated in this way to the Cyprus slag.

LI. The dross of lead is also utilized. The best is that which approximates in colour most closely to yellow, containing no remnants of lead or sulphur, and does not look earthy. This is broken up into small fragments and washed in mortars till the water assumes a yellow colour, and poured off into a clean vessel, and the process is repeated several times till the most valuable part settles as a sediment at the bottom. Lead dross has the same effects as lead, but to a more active degree. This suggests a remark on the marvellous efficacy of human experiment, which has not left even the dregs of substances and the foulest refuse untested in such numerous ways!

LII. Slag[c] is also made from lead in the same way as from Cyprus copper; it is washed with rain § 128 *sqq.*
water in linen sheets of fine texture and the earthy particles are got rid of by rinsing, and the residue is sifted and then ground. Some prefer to separate the powder with a feather. and to grind it up with aromatic wine.

173 LIII. Est et molybdaena, quam alio loco galenam appellavimus, vena argenti plumbique communis. melior haec, quanto magis aurei coloris quantoque minus plumbosa, friabilis et modice gravis. cocta cum oleo iocineris colorem trahit. adhaerescit et auri argentique fornacibus; hanc metallicam vocant. laudatissima quae in Zephyrio fiat; probantur minime
174 terrenae minimeque lapidosae. coquuntur lavanturque scoriae modo. usus in lipara ad lenienda ac refrigeranda ulcera et emplastris, quae non inligantur, sed inlita ad cicatricem perducunt in teneris corporibus mollissimisque partibus. compositio eius e libris III et cerae libra, olei III heminis, quod in senili corpore cum fracibus additur. temperatur cum spuma argenti et scoria plumbi ad dysenteriam et tenesmum fovenda calida.

175 LIV. Psimithium quoque, hoc est cerussam, plumbariae dant officinae, laudatissimam in Rhodo. fit autem ramentis plumbi tenuissimis super vas aceti asperrimi inpositis atque ita destillantibus. quod ex eo cecidit in ipsum acetum, arefactum molitur et cribratur iterumque aceto admixto in pastillos dividitur et in sole siccatur aestate. fit et alio modo, addito in urceos aceti plumbo opturatos per dies X derasoque ceu situ ac rursus reiecto, donec deficiat

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[a] In this word Pliny includes two things: (i) a mineral which is lead sulphide (still called galena) or perhaps lead oxide (massicot); (ii) an artificial product which is litharge. Both Pliny and Dioscorides call the mineral yellow, which is true of litharge, not of lead sulphide. So the mineral may be the yellow or yellowish red massicot (K. C. Bailey).

[b] Sugar of lead, not the modern basic lead carbonate or 'white lead.'

LIII. There is also *molybdaena* [a] (which in another place we have called *galena*); it is a mineral compound of silver and lead. It is better the more golden its colour and the less leaden: it is friable and of moderate weight. When boiled with oil it acquires the colour of liver. It is also found adhering to furnaces in which gold and silver are smelted; in this case it is called metallic sulphide of lead. The kind most highly esteemed is produced at Zephyrium. Varieties with the smallest admixture of earth and of stone are approved of; they are melted and washed like dross. It is used in preparing a particular emollient plaster for soothing and cooling ulcers and in plasters which are not applied with bandages but which they use as a liniment to promote cicatrization on the bodies of delicate persons and on the more tender parts. It is a composition of three pounds of sulphide of lead and one of wax with half a pint of oil, which is added with solid lees of olives in the case of an elderly patient. Also combined with scum of silver and dross of lead it is applied warm for fomenting dysentery and constipation.

[a] *Molybdaena.* XXXIII, 95; XXXIV 159.

LIV. '*Psimithium*' also, that is cerussa or lead acetate,[b] is produced at lead-works. The most highly spoken of is in Rhodes. It is made from very fine shavings of lead placed over a vessel of very sour vinegar and so made to drip down. What falls from the lead into the actual vinegar is dried and then ground and sifted, and then again mixed with vinegar and divided into tablets and dried in the sun, in summertime. There is also another way of making it, by putting the lead into jars of vinegar kept sealed up for ten days and then scraping off the sort of decayed metal on it and putting it back in

Sugar of lead.

176 materia. quod derasum est, teritur et cribratur et coquitur in patinis misceturque rudiculis, donec rufescat et simile sandaracae fiat. dein lavatur dulci aqua, donec nubeculae omnes eluantur. siccatur postea similiter et in pastillos dividitur. vis eius eadem quae supra dictis, lenissima tantum ex omnibus, praeterque ad candorem feminarum. est autem letalis potu sicut spuma argenti. postea cerussa ipsa, si coquatur, rufescit.

177 LV. Sandaracae quoque propemodum dicta natura est. invenitur autem et in aurariis et in argentariis metallis, melior quo magis rufa quoque magis virus sulpuris[1] redolens ac pura friabilisque. valet purgare, sistere, excalfacere, erodere, summa eius dote septica. explet alopecias ex aceto inlita; additur oculorum medicamentis; fauces purgat cum melle sumpta vocemque limpidam et canoram facit; suspiriosis et tussientibus iucunde medetur cum resina terebinthina in cibo sumpta, suffita quoque cum cedro ipso nidore isdem medetur.

178 LVI. Et arrhenicum ex eadem est materia. quod optimum, coloris etiam in auro excellentis; quod vero pallidius aut sandaracae simile est, deterius iudicatur. est et tertium genus, quo miscetur aureus color sandaracae. utraque haec squamosa,

[1] sulpuris *add. Mayhoff.*

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[a] Red sulphide of arsenic.
[b] Yellow sulphide of arsenic.

the vinegar, till the whole of it is used up. The stuff scraped off is ground up and sifted and heated in shallow vessels and stirred with small rods till it turns red and becomes like *sandarach*, realgar.[a] Then it is washed with fresh water till all the cloudy impurities have been removed. Afterwards it is dried in a similar way and divided into tablets. Its properties are the same as those of the substances mentioned above, only it is the mildest of them all, and beside that, it is useful for giving women a fair complexion; but like scum of silver, it is a deadly poison. The lead acetate itself if afterwards melted becomes red.

LV. Of realgar also the properties have been almost completely described. It is found both in goldmines and silvermines; the redder it is and the more it gives off a poisonous scent of sulphur and the purer and more friable it is, the better it is. It acts as a cleanser, as a check to bleeding, as a calorific and a caustic, being most remarkable for its corrosive property; used as a liniment with vinegar it removes fox-mange; it forms an ingredient in eye-washes, and taken with honey it cleans out the throat. It also produces a clear and melodious voice, and mixed with turpentine and taken in the food, is an agreeable remedy for asthma and cough; its vapour also remedies the same complaints if merely used as a fumigation with cedar wood. *Realgar.*

LVI. Orpiment[b] also is obtained from the same substance. The best is of a colour of even the finest-coloured gold, but the paler sort or what resembles sandarach is judged inferior. There is also a third class which combines the colours of gold and of sandarach. Both of the latter are scaly, but *Orpiment.*

illud vero siccum purumque, gracili venarum discursu fissile. vis eadem quae supra, sed acrior. itaque et causticis additur et psilotris. tollit et pterygia digitorum carnesque narium et condylomata et quidquid excrescit. torretur, ut valdius[1] prosit, in nova testa, donec mutet colorem.

[1] valdius *B*: validius *rell.*

Note on XXXIV. 17 and 70.

The group of two figures (representing Harmodius and Aristogeiton) made by Antenor in bronze, set up at Athens in 510–9 B.C., was carried off by Xerxes in 480; and a new bronze pair was made by Critius and Nesiotes and set up at Athens in 477. Antenor's group was found by Alexander in Persia, and on his orders, it seems, one of his successors *c.* 293–2 restored it to Athens; part of the original base of Critius' and Nesiotes' group, it seems, has now been found; the marble group now at Naples is thought to be a Roman copy of the same group and made in the 2nd cent. A.D. The bearded head of Aristogeiton can be restored from a head in the Vatican. Copies of this group can be seen on four Attic vases of the first half of the fifth century B.C. (Beazley, *Journ. of Hellen. Stud.* LXVIII (1948), 28), and one of about 400 B.C. (W. Hahland, *Vasen um Meidias* p. 6 and pl. 6a).

the other is dry and pure. and divided in a delicate tracery of veins. Its properties are the same as mentioned above, but more active. Accordingly it is used as an ingredient in cauteries and depilatories. It also removes overgrowths of flesh on to the nails, and pimples in the nostrils and swellings of the anus and all excrescences. To increase its efficacy it is heated in a new earthenware pot till it changes its colour.

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also in the sketch in low relief on a marble throne now at Broomhall. Other copies of Critius' and Nesiotes' work such as that on a coin of Cyzicus *c.* 420 B.C., those on Athena's shield depicted on three Attic amphorae of *c.* 400 B.C. (or a later date), and that on an Athenian tetradrachm of *c.* 400 B.C., are probably imitations made from memory. C. Seltman's opinion that the Broomhall relief suggests a copy of Antenor's group is doubtful (Seltman, *Journ. of Hellen. Stud.*, LXVII (1947), 22–27). The group made by Praxiteles (Pliny, XXXIV. 70) was no doubt a fresh creation of his own, unless there is some blunder on Pliny's part.

BOOK XXXV

LIBER XXXV

I. Metallorum, quibus opes constant, adgnascentiumque iis natura indicata propemodum est, ita conexis rebus, ut immensa medicinae silva officinarumque tenebrae et morosa caelandi fingendique ac tinguendi subtilitas simul dicerentur. restant terrae ipsius genera lapidumque vel numerosiore[1] serie,[2] plurimis singula a[3] Graecis praecipue voluminibus tractata. nos in iis brevitatem sequemur utilem instituto, modo nihil necessarium
2 aut naturale omittentes, primumque dicemus quae restant de pictura, arte quondam nobili—tunc cum expeteretur regibus populisque—et alios nobilitante, quos esset dignata posteris tradere, nunc vero in totum marmoribus pulsa. iam quidem et auro, nec tantum ut parietes toti operiantur, verum et interraso marmore vermiculatisque ad effigies rerum et
3 animalium crustis. non placent iam abaci nec spatia montes in cubiculo dilatantia:[4] coepimus et lapidem[5] pingere. hoc Claudii principatu inventum, Neronis

[1] numerosiore *Gelen*: numerosiores.
[2] serie *Gelen*: seriae *B*: erie *aut* aeriae *aut sim. rell*
[3] a *fortasse delendum* (*Mayhoff*).
[4] dilatata *coni. Ian*: dilatant iam *Detlefsen.*
[5] lapidem *cd. Par. Lat.* 6797, *cd. Par.* 6801: lapide *rell.*

[a] This translates *lapidem.* If we read *lapide* 'with stone,' Pliny would mean a kind of mosaic. But see §§ 116, 118.

BOOK XXXV

I. We have now practically indicated the nature of metals, in which wealth consists, and of the substances related to them, connecting the facts in such a way as to indicate at the same time the enormous topic of medicine and the mysteries of the manufactories and the fastidious subtlety of the processes of carving and modelling and dyeing. There remain the various kinds of earth and of stones, forming an even more extensive series, each of which has been treated in many whole volumes, especially by Greeks. For our part in these topics we shall adhere to the brevity suitable to our plan, yet omitting nothing that is necessary or follows a law of Nature. And *Painting.* first we shall say what remains to be said about painting, an art that was formerly illustrious, at the time when it was in high demand with kings and nations and when it ennobled others whom it deigned to transmit to posterity. But at the present time it has been entirely ousted by marbles, and indeed finally also by gold, and not only to the point that whole party-walls are covered—we have also marble engraved with designs and embossed marble slabs carved in wriggling lines to represent objects and animals. We are no longer content with panels nor with surfaces displaying broadly a range of mountains in a bedchamber; we have begun even to paint on the masonry.[a] This was invented in the

vero maculas, quae non essent in crustis, inserendo unitatem variare, ut ovatus esset Numidicus, ut purpura distingueretur Synnadicus, qualiter illos nasci optassent deliciae. montium haec subsidia deficientium, nec cessat luxuria id agere, ut quam plurimum incendiis perdat.

4 II. Imaginum quidem pictura, qua maxime similes in aevum propagabantur figurae, in totum exolevit. aerei ponuntur clipei argentea facie,[1] surdo figurarum discrimine; statuarum capita permutantur, volgatis iam pridem salibus etiam carminum. adeo materiam conspici malunt omnes quam se nosci, et inter haec pinacothecas veteribus tabulis consuunt[2] alienasque effigies colunt, ipsi honorem non nisi in pretio
5 ducentes, ut frangat heres forasque[3] detrahat laqueo.[4] itaque nullius effigie vivente imagines pecuniae, non suas, relinquunt. iidem palaestrae[5] athletarum imaginibus et ceromata sua exornant, Epicuri voltus per cubicula gestant ac circumferunt secum. natali eius sacrificant, feriasque omni mense vicesima luna[6]

[1] argentea facie *Mayhoff*: argenteae facies.
[2] conferciunt *quidam apud Dalecamp*: complent *coni. Mayhoff*.
[3] forasque *cd. Par.* 6801: furisque *rell.*: forisque *Detlefsen*: furisve *coni. Brotier*.
[4] laqueo *Detlefsen*: laqueis *Urlichs*: laqueū *aut* laqueūs.
[5] palaestrae *coni. Mayhoff*: palaestras.
[6] vicesima luna *hic Mayhoff*: *post* custodiunt *Ian* *post* eius *cdd.*

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[a] Of Synnada in Phrygia in Asia Minor.
[b] So that heads were put on bodies which did not belong to them.
[c] *Ceromata*, Greek for wax ointments used by athletes, and also denoting the rooms where these were applied before or after a match.
[d] Greek εἰκάς, 20th day.

principate of Claudius, while in the time of Nero a plan was discovered to give variety to uniformity by inserting markings that were not present in the embossed marble surface, so that Numidian stone might show oval lines and Synnadic [a] marble be picked out with purple, just as fastidious luxury would have liked them to be by nature. These are our resources to supplement the mountains when they fail us, and luxury is always busy in the effort to secure that if a fire occurs it may lose as much as possible. A.D. 41–54 54–68.

II. The painting of portraits, used to transmit through the ages extremely correct likenesses of persons, has entirely gone out. Bronze shields are now set up as monuments with a design in silver, with only a faint difference between the figures; heads of statues are exchanged for others,[b] about which before now actually sarcastic epigrams have been current: so universally is a display of material preferred to a recognizable likeness of one's own self. And in the midst of all this, people tapestry the walls of their picture-galleries with old pictures, and they prize likenesses of strangers, while as for themselves they imagine that the honour only consists in the price, for their heir to break up the statue and haul it out of the house with a noose. Consequently nobody's likeness lives and they leave behind them portraits that represent their money, not themselves. The same people decorate even their own anointing-rooms [c] with portraits of athletes of the wrestling-ring, and display all round their bedrooms and carry about with them likenesses of Epicurus; they offer sacrifices on his birthday, and keep his festival, which they call the *eikas* [d] on the 20th day of every *Portraits.*

custodiunt, quas icadas vocant, ii maxime, qui se ne viventes quidem nosci volunt. ita est profecto: artes desidia perdidit, et quoniam animorum imagines
6 non sunt, negleguntur etiam corporum. aliter apud maiores in atriis haec erant, quae spectarentur; non signa externorum artificum nec aera aut marmora: expressi cera vultus singulis disponebantur armariis. ut essent imagines, quae comitarentur gentilicia funera, semperque defuncto aliquo totus aderat familiae eius qui umquam fuerat populus. stemmata vero lineis[1] discurrebant ad imagines
7 pictas. tabulina codicibus implebantur et monimentis rerum in magistratu gestarum. aliae foris et circa limina animorum ingentium imagines erant adfixis hostium spoliis, quae nec emptori refigere liceret, triumphabantque etiam dominis mutatis aeternae[2] domus. erat haec stimulatio[3] ingens, exprobrantibus tectis cotidie inbellem dominum intrare in alienum
8 triumphum. exstat Messalae oratoris indignatio, quae prohibuit inseri genti suae Laevinorum alienam imaginem. similis causa Messalae seni expressit volumina illa quae de familiis condidit, cum Scipionis Pomponiani transisset atrium vidissetque adoptione testamentaria Salvittones—hoc enim fuerat cogno-

[1] linteis *Fröhner coll.* 51.
[2] aeternae *Mayhoff*: ipsae *Gelen*: emptae *Ian, Urlichs*: tamen *coni. Sillig*: et me *cdd.* (etiā B^2).
[3] stimulatio *Gelen*: stimmatio B^1: estimatio (*deleto* haec) B^2: stima ratio *rell.* (summa r. *cd. Par. Lat.* 6797).

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[a] A maxim of Epicurus was Λάθε βιώσας 'live unnoticed.'
[b] In private houses.
[c] A branch of the Gens Valeria, to which the Messalae also belonged.

month—these of all people, whose desire it is not to be known even when alive [a]! That is exactly how things are: indolence has destroyed the arts, and since our minds cannot be portrayed, our bodily features are also neglected. In the halls of our ancestors it was otherwise; portraits were the objects displayed to be looked at, not statues by foreign artists, nor bronzes nor marbles, but wax models of faces were set out each on a separate side-board, to furnish likenesses to be carried in procession at a funeral in the clan, and always when some member of it passed away the entire company of his house that had ever existed was present. The pedigrees too were traced in a spread of lines running near the several painted portraits. The archive-rooms [b] were kept filled with books of records and with written memorials of official careers. Outside the houses and round the doorways there were other presentations of those mighty spirits, with spoils taken from the enemy fastened to them, which even one who bought the house was not permitted to unfasten, and the mansions eternally celebrated a triumph even though they changed their masters. This acted as a mighty incentive, when every day the very walls reproached an unwarlike owner with intruding on the triumphs of another! There is extant an indignant speech by the pleader Messala protesting against the insertion among the likenesses of his family of a bust not belonging to them but to the family of the Laevini.[c] A similar reason extracted from old Messala the volumes he composed 'On Families,' because when passing through the hall of Scipio Pomponianus he had observed the Salvittones [d]—that was their

[d] Probably, like the Scipios, a branch of the Gens Cornelia.

men—Africanorum dedecori inrepentes Scipionum nomini. sed—pace Messalarum dixisse liceat—etiam mentiri clarorum imagines erat aliquis virtutum amor multoque honestius quam mereri, ne quis suas expeteret.

9 Non est praetereundum et novicium inventum, siquidem non [1] ex auro argentove, at [2] certe ex aere in bibliothecis dicantur illis, quorum immortales animae in locis iisdem loquuntur, quin immo etiam quae non sunt finguntur, pariuntque desideria non
10 traditos vultus, sicut in Homero evenit.[3] utique [4] maius, ut equidem arbitror, nullum est felicitatis specimen quam semper omnes scire cupere, qualis fuerit aliquis. Asini Pollionis hoc Romae inventum, qui primus bibliothecam dicando ingenia hominum rem publicam fecit. an priores coeperint Alexandreae et Pergami reges, qui bibliothecas magno
11 certamine instituere, non facile dixerim. imaginum amorem [5] flagrasse quondam [6] testes sunt Atticus ille Ciceronis edito de iis volumine, M. Varro benignissimo invento insertis voluminum suorum fecundi-

[1] nunc *Ian, Urlichs*: icones *Detlefsen*: non solum *edd. vett.*
[2] at *Mayhoff*: aut.
[3] devenit *B*: id evenit *Ian.*
[4] utique *coni. Mayhoff*: quo.
[5] amorem *B*: amore *rell.*
[6] (amore . . .) quosdam *coni. Brotier.*

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[a] Scipio Africanus, victor over Hannibal in 202 B.C., and Scipio Aemilianus Africanus, who destroyed Carthage in 146 B.C.

former surname—in consequence of an act of adoption by will creeping into others' preserves, to the discredit of the Scipios called Africanus.[a] But the Messala family must excuse me if I say that even to lay a false claim to the portraits of famous men showed some love for their virtues, and was much more honourable than to entail by one's conduct that nobody should seek to obtain one's own portraits!

Portrait-statues in libraries.

We must not pass over a novelty that has also been invented, in that likenesses made, if not of gold or silver, yet at all events of bronze are set up in the libraries in honour of those whose immortal spirits speak to us in the same places, nay more, even imaginary likenesses are modelled and sense of loss gives birth to countenances that have not been handed down to us, as occurs in the case of Homer. At any rate in my view at all events there is no greater kind of happiness than that all people for all time should desire to know what kind of a man a person was. At Rome this practice originated with Asinius Pollio, who first by founding a library made works of genius the property of the public. **After 39 B.C.** Whether this practice began earlier, with the Kings of Alexandria and of Pergamum,[b] between whom there had been such a keen competition in founding libraries, I cannot readily say. The existence of a strong passion for portraits in former days is evidenced by Atticus the friend of Cicero in the volume he published on the subject and by the most benevolent invention of Marcus Varro, who actually by some means inserted in a prolific output of

[b] Ptolemy I of Egypt (died 283 B.C.) and Attalus I of Pergamum (241–197 B.C.) both founded libraries. Two at Alexandria became famous under Ptolemies II and III.

tati etiam[1] septingentorum inlustrium aliquo modo imaginibus, non passus intercidere figuras aut vetustatem aevi contra homines valere, inventor muneris etiam dis invidiosi, quando immortalitatem non solum dedit, verum etiam in omnes terras misit, ut praesentes esse ubique ceu[2] di possent. et hoc quidem alienis ille praestitit.

12 III. Verum clupeos in sacro vel publico dicare privatim primus instituit, ut reperio, Appius Claudius qui consul cum P. Servilio fuit anno urbis CCLVIIII. posuit enim in Bellonae aede maiores suos, placuitque in excelso spectari et[3] titulos honorum legi, decora res, utique si liberum turba parvulis imaginibus ceu nidum aliquem subolis pariter ostendat, quales clupeos nemo non gaudens favensque aspicit. IV. post eum M. Aemilius collega in consulatu Quinti Lutatii non in basilica modo Aemilia, verum et domi suae posuit, id quoque Martio exemplo. scutis enim, qualibus apud Troiam pugnatum est, continebantur imagines, unde et nomen habuere clupeorum, non, ut perversa grammaticorum suptilitas voluit, a cluendo. origo plena virtutis,

[1] fecunditati etiam *Mayhoff*: f. hominum *Detlefsen*: fecunditatium *B*[1], *cd. Leid. Voss.*, *cd. Flor. Ricc.*: fecunditati *B*[2]: fecunditantium non nominibus tantum *cd. Par. Lat.* 6797.
[2] ceu di *M. Hertz, Urlichs*: cludi.
[3] et *coni. Warmington*: in (*recte?*).

[a] *E.g.* the shield of Achilles, *Iliad* XVIII, 478 ff., and the shield of Aeneas, *Aeneid* VIII, 625 ff.

volumes portraits of seven hundred famous people, not allowing their likenesses to disappear or the lapse of ages to prevail against immortality in men. Herein Varro was the inventor of a benefit that even the gods might envy, since he not only bestowed immortality but despatched it all over the world, enabling his subjects to be ubiquitous, like the gods. This was a service Varro rendered to strangers.

III. But the first person to institute the custom of privately dedicating the shields with portraits in a temple or public place, I find, was Appius Claudius, the consul with Publius Servilius in the 259th year of the city. He set up his ancestors in 495 B.C. the shrine of the Goddess of War, and desired them to be in full view on an elevated spot, and the inscriptions stating their honours to be read. This is a seemly device, especially if miniature likenesses of a swarm of children at the sides display a sort of brood of nestlings; shields of this description everybody views with pleasure and approval. IV. After him Marcus Aemilius, Quintus Lutatius's colleague 78 B.C. in the consulship, set up portrait-shields not only in the Basilica Aemilia but also in his own home, and in doing this he was following a truly warlike example; for the shields which contained the likenesses resembled those[a] employed in the fighting at Troy; and this indeed gave them their name of *clupei*,[b] which is not derived from the word meaning 'to be celebrated,' as the misguided ingenuity of scholars has made out. It is a copious inspiration of valour for there to be a representation on a shield of the

[b] Pliny means that *clupeus* is derived from γλύφω, to carve or emboss, not from the old Latin *cluo* or *clueo*, to be reputed famous.

faciem reddi in scuto eius[1] qui fuerit usus illo.
14 Poeni ex auro factitavere et clupeos et imagines secumque vexere. in castris[2] certe captis talem Hasdrubalis invenit Marcius, Scipionum in Hispania ultor, isque clupeus supra fores Capitolinae aedis usque ad incendium primum fuit. maiorum quidem nostrorum tanta securitas in ea re adnotatur, ut L. Manlio Q. Fulvio cos. anno urbis DLXXV M. Aufidius tutelae Capitolii[3] redemptor docuerit patres argenteos esse clupeos, qui pro aereis[4] per aliquot iam lustra adsignabantur.

15 V. De picturae initiis incerta nec instituti operis quaestio est. Aegyptii sex milibus annorum aput ipsos inventam, priusquam in Graeciam transiret, adfirmant, vana praedicatione, ut palam est; Graeci autem alii Sicyone, alii aput Corinthios repertam, omnes umbra hominis lineis circumducta, itaque primam talem, secundam singulis coloribus et monochromaton[5] dictam, postquam operosior in-
16 venta erat, duratque talis etiam nunc. inventam liniarem a Philocle Aegyptio vel Cleanthe Corinthio

[1] eius *Detlefsen*: eiusque B^2: cuiusque.
[2] vexere. in castris *Mayhoff*: in castris vexere *B*: i.c. tulere *cd. Par.* 6801: i.c. venere *rell.*
[3] Capitolio *B*: capitoli *cd. Leid. Voss.*
[4] aurei. *Detlefsen.*
[5] e monochromato *B*: et monochromaton *rell.*

[a] Publius and Gnaeus Scipio were destroyed in Spain by the Carthaginians, 212–211 B.C. L. Marcius and T. Fonteius prevented further disasters.
[b] A conjectural alteration gives 'gold.'

countenance of him who once used it. The Carthaginians habitually made both shields and statues of gold, and carried these with them: at all events Marcius, who took vengeance for the Scipios in Spain,[a] found a shield of this kind that belonged to Hasdrubal, in that general's camp when he captured it, and this shield was hung above the portals of the temple on the Capitol till the first fire. Indeed it is noticed that our ancestors felt so little anxiety about this matter that in the 575th year of the city, when the consuls were Lucius Manlius and Quintus Fulvius, the person who contracted for the safety of the Capitol, Marcus Aufidius, informed the Senate that the shields which for a good many censorship periods past had been scheduled as made of bronze [b] were really silver. 83 B.C. 179 B.C.

Origins of painting.

V. The question as to the origin of the art of painting is uncertain [c] and it does not belong to the plan of this work. The Egyptians declare that it was invented among themselves six thousand years ago before it passed over into Greece—which is clearly an idle assertion. As to the Greeks, some of them say it was discovered at Sicyon, others in Corinth, but all agree that it began with tracing an outline round a man's shadow [d] and consequently that pictures were originally done in this way, but the second stage when a more elaborate method had been invented was done in a single colour and called monochrome,[e] a method still in use at the present day. Line-drawing was invented by the Egyptian Philocles or by the Corinthian Cleanthes,

[c] Cf. VII, 205. A. Rumpf, *Journ. of Hellenic St.* LXVII, 10 ff.
[d] But study of extant ancient art refutes this idea.
[e] See §§ 29, 56.

primi exercuere Aridices[1] Corinthius et Telephanes Sicyonius, sine ullo etiamnum hi colore, iam tamen spargentes linias intus. ideo et quos pinxere[2] adscribere institutum. primus inlevit[3] eas colore[4] testae, ut ferunt, tritae[5] Ecphantus[6] Corinthius. hunc eodem nomine alium[7] fuisse quam[8] tradit Cornelius Nepos secutum in Italiam Damaratum, Tarquinii Prisci regis Romani patrem, fugientem a Corintho tyranni iniurias Cypseli, mox docebimus.

17 VI. Iam enim absoluta erat pictura etiam in Italia. exstant certe hodieque antiquiores urbe picturae Ardeae in aedibus sacris, quibus equidem nullas aeque miror, tam longo aevo durantes[9] in orbitate tecti veluti recentes.[9] similiter Lanuvi, ubi Atalante et Helena comminus pictae sunt nudae ab eodem artifice, utraque excellentissima forma, sed altera ut virgo, ne ruinis quidem templi

18 concussae. Gaius princeps tollere eas conatus est libidine accensus, si tectorii natura permisisset. durant et Caere antiquiores et ipsae, fatebiturque quisquis eas diligenter aestimaverit nullam artium celerius consummatam, cum Iliacis temporibus non fuisse eam appareat.

[1] Aridices *Sillig, Keil*: aradices *B*: ardices *rell.*

[2] pinxere *Mayhoff*: pingerent *edd. vett.*: pingere.

[3] inlevit *Urlichs*: invenit.

[4] colore *B*: colores *rell.*: colorare *Gelen*: colorare colore *Ian.*

[5] tritae *Sillig*: tristę B^1: triste B^2: ita *aut* it *rell.*

[6] Ecphantus *Sillig, O. Jahn*: ephantus *B*: elephantus *rell.*

[7] eundem nomine alio *Schultz.*

[8] *V.l.* quem: quam quem *Sillig, Ian.*

[9] *V.l.* durantis . . . recentis: durantibus . . . recentibus *coni. Sillig.*

but it was first practised by the Corinthian Aridices and the Sicyonian Telephanes—these were at that stage not using any colour, yet already adding lines here and there to the interior of the outlines; hence it became their custom to write on the pictures the names of the persons represented. Ecphantus of Corinth is said to have been the first to daub these drawings with a pigment made of powdered earthenware. We shall show below that this was another § 152. person, bearing the same name, not the one recorded by Cornelius Nepos to have followed into Italy Demaratus the father of the Roman king Tarquinius *trad.* 616–578 B.C. Priscus when he fled from Corinth to escape the violence of the tyrant Cypselus.

Early Italian painting

VI. For the art of painting had already been brought to perfection even in Italy. At all events there survive even to-day in the temples at Ardea paintings that are older than the city of Rome, which to me at all events are incomparably remarkable, surviving for so long a period as though freshly painted, although unprotected by a roof. Similarly at Lanuvium, where there are an Atalanta and a Helena close together, nude figures, painted by the same artist, each of outstanding beauty (the former shown as a virgin), and not damaged even by the collapse of the temple. The Emperor Caligula from A.D. 37. lustful motives attempted to remove them, but the consistency of the plaster would not allow this to be done. There are pictures surviving at Caere that are even older. And whoever carefully judges these works will admit that none of the arts reached full perfection more quickly, inasmuch as it is clear that painting did not exist in the Trojan period.

19 VII. Apud Romanos quoque honos mature huic arti contigit, siquidem cognomina ex ea Pictorum traxerunt Fabii clarissimae gentis, princepsque eius cognominis ipse aedem Salutis pinxit anno urbis conditae CCCCL, quae pictura duravit ad nostram memoriam aede ea Claudi principatu exusta. proxime celebrata est in foro boario aede Herculis Pacui poetae pictura. Enni sorore genitus hic fuit clarioremque artem eam Romae fecit gloria scaenae.
20 postea non est spectata honestis manibus, nisi forte quis Turpilium equitem Romanum e Venetia nostrae aetatis velit referre, pulchris eius operibus hodieque Veronae exstantibus. laeva is manu pinxit, quod de nullo ante memoratur. parvis [1] gloriabatur tabellis extinctus nuper in longa senecta Titedius [2] Labeo praetorius, etiam proconsulatu provinciae Narbonensis functus, sed ea re inrisa [3] etiam con-
21 tumeliae erat. fuit et principum virorum non omittendum de pictura celebre consilium, cum Q. Pedius, nepos Q. Pedii consularis triumphalisque et a Caesare dictatore coheredis Augusto dati, natura mutus esset. in eo Messala orator, ex cuius familia pueri avia fuerat, picturam docendum

[1] paruisse *B*: parvis ipse *coni. Mayhoff.*
[2] Titedius *B*: sit edius *rell.*: Titidius *Sillig*: Antistius *Hardouin*: Aterius *edd. vett.*
[3] inrisa *Mayhoff*: inlisa *B*: in risu *rell.* (irrisu *cd. Par. Lat.* 6797).

[a] Roman writer of tragedies, *c.* 220–*c.* 130 B.C.
[b] Famous Roman epic and dramatic poet, 239–169 B.C.

VII. In Rome also honour was fully attained by this art at an early date, inasmuch as a very distinguished clan of the Fabii derived from it their surname of Pictor, 'Painter,' and the first holder of the name himself painted the Temple of Health in the year 450 from the foundation of the City: the work survived down to our own period, when the temple was destroyed by fire in the principate of Claudius. Next in celebrity was a painting by the poet Pacuvius [a] in the temple of Hercules in the Cattle Market. Pacuvius was the son of a sister of Ennius,[b] and he added distinction to the art of painting at Rome by reason of his fame as a playwright. After Pacuvius, painting was not esteemed as handiwork for persons of station, unless one chooses to recall a knight of Rome named Turpilius, from Venetia, in our own generation, because of his beautiful works still surviving at Verona. Turpilius painted with his left hand, a thing recorded of no preceding artist. Titedius Labeo, a man of praetorian rank who had actually held the office of Proconsul of the Province of Narbonne, and who died lately in extreme old age, used to be proud of his miniatures, but this was laughed at and actually damaged his reputation. There was also a celebrated debate on the subject of painting held between some men of eminence which must not be omitted, when the former consul and winner of a triumph Quintus Pedius, who was appointed by the Dictator Caesar as his joint heir with Augustus, had a grandson Quintus Pedius who was born dumb; in this debate the orator Messala, of whose family the boy's grandmother had been a member, gave the advice that the boy should have lessons in painting, and

Early Roman painting and painters

304 B.C.

49–44 B.C.

censuit, idque etiam divus Augustus comprobavit;
22 puer magni profectus in ea arte obiit. dignatio autem praecipua Romae increvit, ut existimo, a M'. Valerio Maximo Messala, qui princeps tabulam [picturam] [1] proelii, quo Carthaginienses et Hieronem in Sicilia vicerat, proposuit in latere curiae Hostiliae anno ab urbe condita CCCCXC. fecit hoc idem et L. Scipio tabulamque victoriae suae Asiaticae in Capitolio posuit, idque aegre tulisse fratrem Africanum tradunt, haut inmerito, quando filius eius
23 illo proelio captus fuerat. non dissimilem offensionem et Aemiliani subiit L. Hostilius [2] Mancinus, qui primus Carthaginem inruperat, situm eius oppugnationesque depictas proponendo in foro et ipse adsistens populo spectanti singula enarrando. qua comitate proximis comitiis consulatum adeptus est. habuit et scaena ludis Claudii Pulchri magnam admirationem picturae, cum ad tegularum similtudinem corvi decepti imagine [3] advolarent.

24 VIII. Tabulis autem externis auctoritatem Romae publice fecit primus omnium L. Mummius, cui cognomen Achiaci victoria dedit. namque cum in praeda vendenda rex Attalus [4] X|VI| [5] emisset tabulam Aristidis, Liberum patrem, pretium miratus

[1] *Mayhoff*: picturā *B*: pictam *rell.*
[2] hostili'm. S. *B*: hostilius M.f. *coni. Ian.*
[3] *V.l.* imaginem: imagini *Ian.*
[4] rex attalus distraxisset et *cd. Par.* 6801.
[5] X|VI| *Detlefsen*: X.$\overline{\text{VI}}$ *Hardouin*: XVI *aut* XIII *cdd.*

[a] Over Antiochus III in 190 B.C.
[b] Mancinus commanded the Roman fleet in the Third Punic War when Carthage was taken and destroyed by Scipio Aemilianus in 146 B.C.
[c] Over the Greeks in 146 B.C., when Mummius destroyed Corinth.

his late lamented Majesty Augustus also approved of the plan. The child made great progress in the art, but died before he grew up. But painting chiefly derived its rise to esteem at Rome, in my judgement, from Manius Valerius Maximus Messala, who in the year 490 after the foundation of the city first showed a picture in public on a side wall of the Curia Hostilia: the subject being the battle in Sicily in which he had defeated the Carthaginians and Hiero. The same thing was also done by Lucius Scipio, who put up in the Capitol a picture of his Asiatic victory [a]: this is said to have annoyed his brother Africanus, not without reason, as his son had been taken prisoner in that battle. Also Lucius Hostilius Mancinus [b] who had been the first to force an entrance into Carthage incurred a very similar offence with Aemilianus by displaying in the forum a picture of the plan of the city and of the attacks upon it and by himself standing by it and describing to the public looking on the details of the siege, a piece of popularity-hunting which won him the consulship at the next election. Also the stage erected for the shows given by Claudius Pulcher won great admiration for its painting, as crows were seen trying to alight on the roof tiles represented on the scenery, quite taken in by its realism.

264 B.C.

99 B.C.

Foreign paintings in Rome.

L. Mummius.

VIII. The high esteem attached officially to foreign paintings at Rome originated from Lucius Mummius who from his victory [c] received the surname of Achaicus. At the sale of booty captured King Attalus [d] bought for 600,000 denarii a picture of Father Liber or Dionysus by Aristides, but the

[d] Attalus II of Pergamum, 159–138 B.C.

suspicatusque aliquid in ea virtutis, quod ipse nesciret, revocavit tabulam, Attalo multum querente, et in Cereris delubro posuit, quam primam arbitror picturam externam Romae publicatam.

25 deinde video et in foro positas volgo. hinc enim ille Crassi oratoris lepos agentis sub Veteribus; cum testis compellatus instaret: dic ergo, Crasse, qualem me noris? talem, inquit, ostendens in tabula inficetissime Gallum exerentem linguam. in foro fuit et illa pastoris senis cum baculo, de qua Teutonorum legatus respondit interrogatus, quantine[1] eum aestimaret, donari sibi nolle talem vivum verumque.

26 IX. Sed praecipuam auctoritatem publice tabulis fecit Caesar dictator Aiace et Media ante Veneris Genetricis aedem dicatis, post eum M. Agrippa, vir rusticitati propior quam deliciis. exstat certe eius oratio magnifica et maximo civium digna de tabulis omnibus signisque publicandis, quod fieri satius fuisset quam in villarum exilia pelli. verum eadem illa torvitas tabulas duas Aiacis et Veneris mercata est a Cyzicenis HS[2] |X̄II|;[3] in thermarum quoque

[1] quanti *cd. Par.* 6801.
[2] HS *Gelen*: h ̅I̅I̅I̅I̅ *B*¹: hs̄ *B*²: *om. rell.*
[3] |X̄II| *Ian*: *alii alia*: XII *B*: XIII *rell.*

[a] With regard to this story: (i) there was no auction of pictures; Mummius took to Rome the most valuable and handed over the rest to Philopoemen. (ii) Attalus was not present at Corinth (where this scene occurred). When the Roman soldiers were using the pictures as dice-boards, Philopoemen offered M. 100 talents if he should assign Aristides' picture to Attalus' share (Paus. VII, 16, 1; 8; Strabo VIII, 4. 23 = 381).

price surprised Mummius, who suspecting there must be some merit in the picture of which he was himself unaware had the picture called back, in spite of Attalus's strong protests, and placed it in the Shrine of Ceres: the first instance, I believe, of a foreign picture becoming state-property at Rome.[a] After this I see that they were commonly placed even in the forum: to this is due the famous witticism of the pleader Crassus, when appearing in a case Below The Old Shops; a witness called kept asking him: 'Now tell me, Crassus, what sort of a person do you take me to be?' 'That sort of a person,' said Crassus, pointing to a picture of a Gaul putting out his tongue [b] in a very unbecoming fashion. It was also in the forum that there was the picture of the Old Shepherd with his Staff, about which the Teuton envoy when asked what he thought was the value of it said that he would rather not have even the living original as a gift!

IX. But it was the Dictator Caesar who gave *Caesar.* outstanding public importance to pictures by dedicating paintings of Ajax and Medea in front of the 46 B.C. temple of Venus Genetrix; and after him Marcus 63–12 B.C. Agrippa, a man who stood nearer to rustic simplicity than to refinements. At all events there is preserved a speech of Agrippa, lofty in tone and worthy of the greatest of the citizens, on the question of making all pictures and statues national property, a procedure which would have been preferable to banishing them to country houses. However, that same severe spirit paid the city of Cyzicus 1,200,000 sesterces for two pictures, an Ajax and an Aphrodite; he had also had small paintings let into the marble

[b] Not apparently as in insult but as an averting act.

calidissima parte marmoribus incluserat parvas tabellas, paulo ante, cum reficerentur, sublatas.

27 X. Super omnes divus Augustus in foro suo cele-
berrima in parte posuit tabulas duas, quae Belli
faciem pictam habent et Triumphum, item Castores
ac Victoriam. posuit et quas dicemus sub artificum
mentione in templo Caesaris patris. idem in curia
quoque, quam in comitio consecrabat, duas tabulas
inpressit parieti. Nemean sedentem supra leonem,
palmigeram ipsam, adstante[1] cum baculo sene,
cuius supra caput tabella bigae dependet, Nicias
scripsit[2] se inussisse; tali enim usus est verbo.
28 alterius tabulae admiratio est puberem filium seni
patri similem esse aetatis salva differentia, super-
volante aquila draconem complexa; Philochares hoc
suum opus esse testatus est, inmensa, vel unam si
tantum hanc tabulam aliquis aestimet, potentia
artis, cum propter Philocharen ignobilissimos alioqui
Glaucionem filiumque eius Aristippum senatus
populi Romani tot saeculis spectet! posuit et
Tiberius Caesar, minime comis imperator, in templo
ipsius Augusti quas mox indicabimus. hactenus
dictum sit de dignitate artis morientis.

29 XI. Quibus coloribus singulis primi pinxissent diximus, cum de iis pigmentis traderemus in metallis,

[1] adstante *edd. vett.*: adstantem.
[2] asscripsit *coni. Mayhoff.*

[a] Castor and Pollux (Polydeuces).
[b] Julius Caesar who had adopted Augustus.
[c] The Nemean forest (personified) where Heracles killed the Nemean lion.
[d] See pp. 356–9.

even in the warmest part of his Hot Baths; which were removed a short time ago when the Baths were being repaired.

X. His late lamented Majesty Augustus went beyond all others, in placing two pictures in the most frequented part of his forum, one with a likeness of War and Triumph, and one with the Castors [a] and Victory. He also erected in the Temple of his father Caesar [b] pictures we shall specify in giving the names of artists. He likewise let into a wall in the curia which he was dedicating in the comitium: a Nemea [c] seated on a lion, holding a palm-branch in her hand, and standing at her side an old man leaning on a stick and with a picture of a two-horse chariot hung up over his head, on which there was an inscription saying that it was an 'encaustic' design—such is the term which he employed—by Nicias.[d] The second picture is remarkable for displaying the close family likeness between a son in the prime of life and an elderly father, allowing for the difference of age: above them soars an eagle with a snake in its claws; Philochares has stated this work to be by him showing the immeasurable power exercised by art if one merely considers this picture alone, inasmuch as thanks to Philochares two otherwise quite obscure persons Glaucio and his son Aristippus after all these centuries have passed still stand in the view of the senate of the Roman nation! The most ungracious emperor Tiberius also placed pictures in the temple of Augustus himself which we shall soon mention. Thus much for the dignity of this now expiring art.

Augustus and Tiberius. § 91. 29 B.C. A.D. 14–37. § 131.

XI. We stated what were the various single colours used by the first painters when we were discussing while on the subject of metals the pig-

Painters colours. XXXIII 117.

quae[1] monochromata a[2] genere[3] picturae vocantur.[4] qui deinde et quae invenerint et quibus temporibus, dicemus in mentione artificum, quoniam indicare naturas colorum prior causa operis instituti est. tandem se ars ipsa distinxit et invenit lumen atque umbras, differentia colorum alterna vice sese excitante. postea deinde adiectus est splendor, alius hic quam lumen. quod inter haec et umbras esset, appellarunt tonon, commissuras vero colorum et transitus harmogen.

30 XII. Sunt autem colores austeri aut floridi. utrumque natura aut mixtura evenit. floridi sunt —quos dominus pingenti[5] praestat—minium, Armenium, cinnabaris, chrysocolla, Indicum, purpurissum; ceteri austeri. ex omnibus alii nascuntur, alii fiunt. nascuntur Sinopis, rubrica, Paraetonium, Melinum, Eretria, auripigmentum; ceteri finguntur, primumque quos in metallis diximus, praeterea e vilioribus ochra, cerussa usta, sandaraca, sandyx, Syricum, atramentum.

[1] quae *Sillig*: qui *cdd.*: *del. Littré.*
[2] monochromata a *Mayhoff*: m. ea *Littré*: monochromatea *cd. Par.* 6801 *ut videtur*: mox negrammatae a *B*: mox neogrammatea *rell.*
[3] genere *Mayhoff*: genera.
[4] vocantur *B*: vocaverunt *rell.*
[5] pingenti *ed. Basil.*: fingenti.

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[a] Study of ancient art does *not* show that painting started with the use of single colours.
[b] The Greek term *ἁρμογή* means adjustment of parts.
[c] *Minium.* See § 33 (note) and XXXIII, 111–123.
[d] A rich blue colour (from Armenia), the modern azurite. See also § 47.
[e] *Cinnabaris* here in Pliny. See XXXIII, 115–116.
[f] Our 'malachite.'
[g] Earth stained with Tyrian purple.

ments called monochromes from the class of painting for which they are used. Subsequent[a] inventions and their authors and dates we shall specify in enumerating the artists, because a prior motive for the work now in hand is to indicate the nature of colours. Eventually art differentiated itself, and discovered light and shade, contrast of colours heightening their effect reciprocally. Then came the final adjunct of shine, quite a different thing from light. The opposition between shine and light on the one hand and shade on the other was called contrast, while the juxtaposition of colours and their passage one into another was termed attunement.[b] §§ 353 sqq.

XII. Some colours are sombre and some brilliant, the difference being due to the nature of the substances or to their mixture. The brilliant colours, which the patron supplies at his own expense to the painter, are cinnabar,[c] Armenium,[d] dragon's blood,[e] gold-solder,[f] indigo, bright purple[g]; the rest are sombre. Of the whole list some are natural colours and some artificial. Natural colours are sinopis,[h] ruddle, Paraetonium,[i] Melinum,[j] Eretrian earth[k] and orpiment; all the rest are artificial, and first of all those which we specified among minerals, and moreover among the commoner kinds yellow ochre, burnt lead acetate, realgar, sandyx,[l] Syrian colour[m] and black.[n] XXX, 111, 158, etc.

[h] A brown-red ochre or red oxide of iron from Sinope.

[i] From a white chalk or calcium carbonate, and perhaps also steatite, of Paraetonium in N. Africa; see note [a] on § 36.

[j] A white marl from Melos.

[k] From Eretria in Euboea; perhaps magnesite.

[l] Mixed oxide of lead and oxide of iron.

[m] See § 40.

[n] See XXXIV, 112, 123.

31 XIII. Sinopis inventa primum in Ponto est; inde nomen a Sinope urbe. nascitur et in Aegypto, Baliaribus, Africa, sed optima in Lemno et in Cappadocia, effossa e speluncis. pars, quae saxis adhaesit, excellit. glaebis suus colos, extra maculosus. hac usi sunt veteres ad splendorem. species Sinopidis tres: rubra et minus rubens atque inter has media. pretium optimae X II, usus ad penicillum aut si
32 lignum colorare libeat; eius, quae ex Africa venit, octoni asses—cicerculum appellant; magis ceteris rubet, utilior abacis. idem pretium et eius, quae pressior vocatur, et est maxime fusca. usus ad bases abacorum, in medicina vero blandus ⟨. . . pastillis . . .⟩[1] emplastrisque et malagmatis, sive sicca compositione sive liquida facilis, contra ulcera in umore sita, velut oris, sedis. alvum sistit infusa, feminarum profluvia pota denarii pondere. eadem adusta siccat scabritias oculorum, e vino maxime.

33 XIV. Rubricae genus in ea voluere intellegi quidam secundae auctoritatis, palmam enim Lemniae dabant. minio proxima haec est, multum antiquis celebrata cum insula, in qua nascitur. nec nisi signata venumdabatur, unde et sphragidem appel-

[1] *Mayhoff.*

[a] See note [h], p. 283.
[b] Dark brownish.
[c] This generally is the proper meaning of *minium* except when it is called *m. secundarium* = red lead. See XXXIII, 111–123.

XIII. Sinopis [a] was first discovered in Pontus, and hence takes its name from the city of Sinope. It is also produced in Egypt, the Balearic Islands and Africa, but the best is what is extracted from the caverns of Lemnos and Cappadocia, the part found adhering to the rock being rated highest. The lumps of it are self-coloured, but speckled on the outside. It was employed in old times to give a glow. There are three kinds of Sinopis, the red, the faintly red and the intermediate. The price of the best is 2 denarii a pound: this is used for painting with a brush or else for colouring wood; the kind imported from Africa costs 8 *as*-pieces a pound, and is called chickpea colour [b]; it is of a deeper red than the other kinds, and more useful for panels. The same price is charged for the kind called 'low toned' which is of a very dusky colour. It is employed for the lower parts of panelling; but used as a drug it has a soothing effect in ⟨lozenges and⟩ plasters and poultices, mixing easily either dry or moistened, as a remedy for ulcers in the humid parts of the body such as the mouth and the anus. Used in an enema it arrests diarrhoea, and taken through the mouth in doses of one denarius weight it checks menstruation. Applied in a burnt state, particularly with wine, it dries roughnesses of the eyes.

Ochre of Sinope.

XIV. Some persons have wished to make out that Sinopis only consists in a kind of red-ochre of inferior quality, as they gave the palm to the red ochre of Lemnos. This last approximates very closely to cinnabar,[c] and it was very famous in old days, together with the island that produces it; it used only to be sold in sealed packages, from which it got the name of 'seal red-ochre.' It is used to

Ochre of Lemnos.

34 lavere. hac minium sublinunt adulterantque. in medicina praeclara res habetur. epiphoras enim oculorum mitigat ac dolores circumlita et aegilopia manare prohibet, sanguinem reicientibus ex aceto datur bibenda. bibitur et contra lienum reniumque vitia et purgationes feminarum, item et contra venena et serpentium ictus terrestrium marinorumque, omnibus ideo antidotis familiaris.

35 XV. E reliquis rubricae generibus fabris utilissima Aegyptia et Africana, quoniam maxime sorbentur tectoriis.[1] rubrica[2] autem nascitur et in ferrariis metallis. XVI. Ea et fit ochra[3] exusta in ollis novis luto circumlitis. quo magis arsit in caminis, hoc melior. omnis autem rubrica siccat ideoque ex[4] emplastris conveniet[5] igni etiam sacro.

36 XVII. Sinopidis Ponticae selibrae silis lucidi libris x et Melini Graecensis II mixtis tritisque una per dies duodenos[6] leucophorum fit. hoc est glutinum auri, cum inducitur ligno.

XVIII. Paraetonium loci nomen habet ex Aegypto. spumam maris esse dicunt solidatam cum limo, et ideo conchae minutae inveniuntur in eo. fit et in Creta insula atque Cyrenis. adulteratur Romae creta Cimolia decocta conspissataque. pretium optimo in pondo VI X L. e candidis coloribus

[1] tectoriis *Mayhoff*: picturis.
[2] rubrica *hic Mayhoff*: *infra post* exusta.
[3] ea et fit ochra *Mayhoff*: ex ea fit ochra *aut* ochra ex ea fit.
[4] ex *aut* et *cdd.* (*om. B*).
[5] conveniet *vel* conveniat *Mayhoff*: convenit et.
[6] duodenos *Mayhoff*: duodenis *B*: XII *rell.*

[a] Marsa Labeit in N. Africa, between Egypt and the Syrtes. Cf. n. on § 30.
[b] Cf. XXXV, 195 ff.

supply an undercoating to cinnabar and also for adulterating cinnabar. In medicine it is a substance ranked very highly. Used as a liniment round the eyes it relieves defluxions and pains, and checks the discharge from eye-tumours; it is given in vinegar as a draught in cases of vomiting or spitting blood. It is also taken as a draught for troubles of the spleen and kidneys and for excessive menstruation; and likewise as a remedy for poisons and snake bites and the sting of sea serpents; hence it is in common use for all antidotes.

XV. Among the remaining kinds of red ochre the most useful for builders are the Egyptian and the African varieties, as they are most thoroughly absorbed by plaster. Red ochre is also found in a native state in iron mines. XVI. It is also manufactured by burning ochre in new earthen pots with lids stopped with clay. The more completely it is calcined in the furnaces the better its quality. All kinds of red ochre have a drying property, and consequently will be found suitable in plasters even for erysipelas. *Other ochres.*

XVII. Half a pound of sinopis from Pontus, ten pounds of bright yellow ochre and two pounds of Greek earth of Melos mixed together and pounded up for twelve successive days make 'leucophorum,' a cement used in applying gold-leaf to wood. Cf. XXXIII, 64

XVIII. Paraetonium is called after the place[a] of that name in Egypt. It is said to be sea-foam hardened with mud, and this is why tiny shells are found in it. It also occurs in the island of Crete and in Cyrene. At Rome it is adulterated with Cimolian clay[b] which has been boiled and thickened. The price of the best quality is 50 denarii per 6 lbs. It is the most greasy of all the white colours and makes *White pigments.*

pinguissimum et tectoriis[1] tenacissimum propter levorem.

37 XIX. Melinum candidum et ipsum est, optimum in Melo insula. in Samo quoque[2] nascitur; eo non utuntur pictores propter nimiam pinguitudinem; accubantes effodiunt ibi inter saxa venam scrutantes. in medicina eundem usum habet quem Eretria creta; praeterea linguam tactu siccat, pilos detrahit smectica vi.[3] pretium in libras sestertii singuli.

Tertius e candidis colos est cerussa, cuius rationem in plumbi metallis diximus. fuit et terra per se in Theodoti fundo inventa Zmyrnae, qua veteres ad navium picturas utebantur. nunc omnis ex plumbo et aceto fit, ut diximus.

38 XX. Usta casu reperta est in incendio Piraeei[4] cerussa in urceis[5] cremata. hac primum usus est Nicias supra dictus. optima nunc Asiatica habetur, quae et purpurea appellatur. pretium eius in libras X VI. fit et Romae cremato sile marmoroso et restincto aceto. sine usta non fiunt umbrae.

XXI. Eretria terrae suae habet nomen. hac Nicomachus et Parrhasius usi. refrigerat, emollit, explet volnera; si coquatur, ad siccanda praecipitur, utilis[6] et capitis doloribus et ad deprehendenda

[1] tectoriis *edd. vett.*: tectorii *Mayhoff* (*recte*?): tectori *cdd.*

[2] quod *Mayhoff.*

[3] smectica vi *Urlichs*: metcica ut *cd. Flor. Ricc.*: meccica ut *cd. Leid. Voss., cd. Par. Lat.* 6797: metica ut *B.*

[4] Piraeei *Gelen*: pyrae *edd. vett*: pira et.

[5] urceis B^2: urcis B^1: orcis *rell.*: hortis *edd. vett.*

[6] praecipitur, utilis *Mayhoff*: praecoquitur utilis *B*: utilis praecipua *rell.*

[a] See note [j] on § 30.

[b] Perhaps lead carbonate, cerussite. From Vitruv. VII, 7, 4 we learn that it was green, perhaps because tinted with copper salts.

the most tenacious for plasters because of its smoothness.

XIX. Melinum[a] also is a white colour, the best occurring in the island of Melos. It is found in Samos also, but the Samian is not used by painters, because it is excessively greasy. It is dug up in Samos by people lying on the ground and searching for a vein among the rocks. It has the same use in medicine as earth of Eretria; it also dries the tongue by contact, and acts as a depilatory, with an abrasive, effect. It costs a sesterce a pound.

The third of the white pigments is ceruse or lead acetate, the nature of which we have stated in xxxiv, speaking of the ores of lead. There was also once a 175. native ceruse earth[b] found on the estate of Theodotus at Smyrna, which was employed in old days for painting ships. At the present time all ceruse is manufactured from lead and vinegar, as we said.

XX. Burnt ceruse was discovered by accident, *Ceruse, etc.* when some was burnt up in jars in a fire at Piraeus. It was first employed by Nicias above mentioned. Asiatic ceruse is now thought the best; it is also called purple ceruse and it costs 6 denarii per lb. It § 327. is also made at Rome by calcining yellow ochre which is as hard as marble and quenching it with vinegar. Burnt ceruse is indispensable for representing shadows.

XXI. Eretrian earth[c] is named from the country that produces it. It was employed by Nicomachus and Parrhasius. It has cooling and emollient effects and fills up wounds; if boiled it is prescribed as a desiccative, and is useful for pains in the head and for detecting internal suppurations, as these are

See note [k] on § 30.

pura; subesse enim ea intellegunt, si ex aqua inlita continuo [1] arescat.

39 XXII. Sandaracam et ochram Iuba tradidit in insula Rubri maris Topazo nasci, sed inde non pervehuntur ad nos. sandaraca quomodo fieret diximus. fit et adulterina ex cerussa in fornace cocta. color esse debet flammeus. pretium in libras asses quini.

40 XXIII. Haec si torreatur aequa parte rubrica admixta, sandycem facit, quamquam animadverto Vergilium existimasse herbam id esse illo versu:

Sponte sua sandyx pascentis vestiet [2] agnos.

pretium in libras dimidium eius quod sandaracae. nec sunt alii colores maioris ponderis.

XXIV. Inter facticios est et Syricum, quo minium sublini diximus. fit autem Sinopide et sandyce mixtis.

41 XXV. Atramentum quoque inter facticios erit, quamquam est et terrae,[3] geminae originis. aut enim salsuginis modo emanat, aut terra ipsa sulpurei coloris ad hoc probatur. inventi sunt pictores, qui carbones infestatis [4] sepulchris effoderent.[5] inportuna haec omnia ac novicia. fit enim e fuligine pluribus modis, resina vel pice exustis, propter

[1] inlita continuo *Mayhoff*: inlita non *cdd.* (inlinunt non *B*).

[2] vestiet *cd. Par.* 6801, *item Verg.*: vestiat *rell.*

[3] terrae *aut* terra *cdd.*: e terra *Madvig.*

[4] infestatis *Mayhoff qui et* infestantes sepulchra *coni.*: infectant *aut* infectos *cdd.*: iniectos *coni. Sillig*: adfectarent *Detlefsen* (sepulchris carbones infectos *cd. Par.* 6801).

[5] effoderent *cd. Tolet., cd. Par.* 6801: effodere *B*: infoderet *rell.* (infoderent *cd. Par. Lat.* 6797).

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[a] Zeboiget.

[b] Virg. *Ecl.* IV, 45 (*vestiet* Virg.). There is no proof that Virgil did take sandyx to be a plant.

shown to be present if when it is applied with water it immediately dries up.

XXII. According to Juba sandarach or realgar and ochre are products of the island of Topazus [a] in the Red Sea, but they are not imported from those parts to us. We have stated the method of making sandarach. An adulterated sandarach is also made from ceruse boiled in a furnace. It ought to be flame-coloured. Its price is 5 asses per lb. xxxiv, 177.

XXIII. If ceruse is mixed with red ochre in equal quantities and burnt, it produces sandyx or vermilion—though it is true that I observe Virgil held the view that sandyx is a plant, from the line:

> Sandyx self-grown shall clothe the pasturing lambs.[b]

Its cost per lb. is half that of sandarach. No other colours weigh heavier than these.

XXIV. Among the artificial colours is also Syrian colour, which as we said is used as an undercoating for cinnabar and red lead. It is made by mixing sinopis and sandyx together.

Black pigments.

XXV. Black pigment will also be classed among the artificial colours, although it [c] is also derived from earth in two ways; it either exudes from the earth like the brine in salt pits, or actual earth of a sulphur colour is approved for the purpose. Painters have been known to dig up charred remains from graves thus violated to supply it. All these plans are troublesome and new-fangled; for black paint can be made in a variety of ways from the soot produced by burning resin or pitch, owing to which

[c] For this mineral shoemaker's black, see XXXIV, 112, 123. The other blacks which follow are mostly composed of carbon.

quod etiam officinas aedificavere fumum eum non emittentes. laudatissimum eodem modo fit e taedis. adulteratur fornacium balinearumque fuligine quo
42 ad volumina scribenda utuntur. sunt qui et vini faecem siccatam excoquant adfirmentque, si ex bono vino faex ea[1] fuerit, Indici speciem id atramentum praebere. Polygnotus et Micon, celeberrimi pictores, Athenis e vinaceis fecere, tryginon appellantes. Apelles commentus est ex ebore
43 combusto facere, quod elephantinum vocatur. adportatur et Indicum ex India inexploratae adhuc inventionis mihi. fit etiam aput infectores ex flore nigro, qui adhaerescit aereis cortinis. fit et ligno e taedis combusto tritisque in mortario carbonibus. mira in hoc saepiarum natura, sed ex iis non fit. omne autem atramentum sole perficitur, librarium cumme,[2] tectorium glutino admixto. quod aceto liquefactum est, aegre eluitur.

44 XXVI. E reliquis coloribus, quos a dominis dari diximus propter magnitudinem pretii, ante omnes est purpurissum. creta argentaria cum purpuris pariter tinguitur bibitque eum colorem celerius lanis. praecipuum est primum, fervente aheno

[1] faex ea *Mayhoff*: facta *B*: faex *rell.* (fex *cd. Leid. Voss.*).
[2] cumme *Sillig*: gummi *Gelen*: comme *cdd.* (me B^1 et B^2).

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[a] Probably the real indigo (§ 46) is meant here.
[b] Some unknown carbon pigment, not the indigo of § 46.
[c] Or: 'this latter variety is wonderfully like the pigment of the cuttle-fish, but is never made from these creatures' (K. C. Bailey).
[d] Polishing-powder of pure ground white earth.

factories have actually been built with no exit for the smoke produced by this process. The most esteemed black paint is obtained in the same way from the wood of the pitch-pine. It is adulterated by mixing it with the soot of furnaces and baths, which is used as a material for writing. Some people calcine dried wine-lees, and declare that if the lees from a good wine are used this ink has the appearance of Indian ink.[a] The very celebrated painters Polygnotus and Micon at Athens made black paint from the skins of grapes, and called it grape-lees ink. Apelles invented the method of making black from burnt ivory; the Greek name for this is elephantinon. There is also an Indian black,[b] imported from India, the composition of which I have not yet discovered. A black is also produced with dyes from the black florescence which adheres to bronze pans. One is also made by burning logs of pitch-pine and pounding the charcoal in a mortar. The cuttle-fish has a remarkable property in forming a black secretion, but no colour is made from this.[c] The preparation of all black is completed by exposure to the sun, black for writing ink receiving an admixture of gum and black for painting walls an admixture of glue. Black pigment that has been dissolved in vinegar is difficult to wash out.

XXVI. Among the remaining colours which be- *Purples.*
cause of their high cost, as we said, are supplied § 30.
by patrons, dark purple holds the first place. It is produced by dipping silversmiths' earth[d] along with purple cloth and in like manner, the earth absorbing the colour more quickly than the wool. The best is that which being the first formed in the boiling cauldron becomes saturated with the dyes in their

rudibus medicamentis inebriatum, proximum egesto eo addita creta in ius idem et, quotiens id factum est, elevatur bonitas pro numero dilutiore sanie.
45 quare Puteolanum potius laudetur quam Tyrium aut Gaetulicum vel Laconicum, unde pretiosissimae purpurae, causa est quod hysgino[1] maxime inficitur rubiaque, quae[2] cogitur sorbere. vilissimum a Canusio. pretium a singulis denariis in libras ad xxx. pingentes sandyce sublita, mox ex[3] ovo inducentes purpurissum, fulgorem minii faciunt. si purpurae[4] facere malunt, caeruleum sublinunt, mox purpurissum ex ovo inducunt.

46 XXVII. Ab hoc maxima auctoritas Indico. ex India venit harundinum spumae adhaerescente limo. cum cernatur, nigrum, at in diluendo mixturam purpurae caeruleique mirabilem reddit. alterum genus eius est in purpurariis officinis innatans cortinis, et est purpurae spuma. qui adulterant, vero Indico tingunt stercora columbina aut cretam Selinusiam vel anulariam vitro inficiunt. probatur carbone; reddit enim quod sincerum est flammam excellentis purpurae et, dum fumat, odorem maris. ob id quidam e scopulis id colligi putant. pretium

[1] hysgino *Hermolaus Barbarus*: hygino *B*: yyg- *aut* yog- *cdd.*: id genus *cd. Par.* 6801: iscino *Isid.*
[2] rubiaque quae I*an*: rubia quae *aut* rubiaque.
[3] ex *add. Mayhoff.*
[4] purpurae *Mayhoff*: purpura *aut* purpuram.

[a] A purplish red colour got from the unidentified plant 'hysge.'
[b] From several species of *Indigofera*.

primary state, and the next best produced when white earth is added to the same liquor after the first has been removed; and every time this is done the quality deteriorates, the liquid becoming more diluted at each stage. The reason why the dark purple of Pozzuoli is more highly praised than that of Tyre or Gaetulia or Laconia, places which produce the most costly purples, is that it combines most easily with hysginum [a] and madder which cannot help absorbing it. The cheapest comes from Canosa. The price is from one to thirty denarii per lb. Painters using it put a coat of sandyx underneath and then add a coat of dark purple mixed with egg, and so produce the brilliance of cinnabar; if they wish instead to produce the glow of purple, they lay a coat of blue underneath, and then cover this with dark purple mixed with egg.

XXVII. Of next greatest importance after this is indigo,[b] a product of India, being a slime that adheres to the scum upon reeds. When it is sifted out it is black, but in dilution it yields a marvellous mixture of purple and blue. There is another kind of it that floats on the surface of the pans [c] in the purple dye-shops, and this is the 'scum of purple.' People who adulterate it stain pigeons' droppings with genuine indigo, or else colour earth of Selinus or ring-earth [d] with woad. It can be tested by means of a live coal, as if genuine it gives off a brilliant purple flame and a smell of the sea while it smokes; on this account some people think that it is collected from rocks on the coast. The price of indigo is 20 denarii per *Indigo.*

[c] Perhaps the vessels containing Tyrian purple.

[d] See § 48. Some white earth; but it is not known whether it came from Selinus in Cilicia or Selinus in Sicily.

Indico X xx[1] in libras. in medicina Indicum rigores et impetus sedat siccatque ulcera.

47 XXVIII. Armenia mittit quod eius nomine appellatur. lapis est, hic quoque chrysocollae modo infectus, optimumque est quod maxime vicinum et communicato colore cum caeruleo. solebant librae eius trecenis[2] nummis taxari. inventa per Hispanias harena est similem curam recipiens; itaque ad denarios senos vilitas rediit. distat a caeruleo candore modico, qui teneriorem hunc efficit colorem. usus in medicina ad pilos tantum alendos habet maximeque in palpebris.

48 XXIX. Sunt etiamnum novicii duo colores e vilissimis: viride est[3] quod Appianum[4] vocatur et chrysocollam mentitur, ceu parum multa ficta[5] sint mendacia eius; fit e creta viridi, aestimatum sestertiis in libras. XXX. Anulare quod vocant, candidum est, quo muliebres picturae inluminantur; fit et ipsum e creta admixtis vitreis gemmis e volgi anulis, inde et anulare dictum.

49 XXXI. Ex omnibus coloribus cretulam amant udoque inlini recusant purpurissum, Indicum, caeruleum, Melinum, auripigmentum, Appianum, cerussa. cerae tinguntur isdem his coloribus ad eas

[1] X xx *B*: xxx *aut* xx *rell.*
[2] trecenis *B*: tricenis *rell.*
[3] viride est *Mayhoff*: virides.
[4] *fortasse* apianum *vel* apiacum (*item* § 49).
[5] ficta *coni. Mayhoff*: dicta.

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[a] Azurite.
[b] Probably azurite found mixed with green malachite.
[c] A conjectural emendation *apianum* or *apiacum* gives 'parsley green.' It was a clay stained by ferrous substances.

pound. Used medicinally it allays cramps and fits and dries up sores.

XXVIII. Armenia sends us the substance[a] named after it Armenian. This also is a mineral that is dyed like malachite, and the best is that[b] which most closely approximates to that substance, the colour partaking also of dark blue. Its price used to be rated at 300 sesterces per pound. A sand has been found all over the Spanish provinces that admits of similar preparation, and accordingly the price has dropped to as low as six denarii. It differs from dark blue by a light white glow which renders this blue colour thinner in comparison. It is only used in medicine to give nourishment to the hair, and especially the eyelashes. *Azurite, etc.*

XXIX. There are also two colours of a very cheap class that have been recently discovered: one is the green called Appian,[c] which counterfeits malachite; just as if there were too few spurious varieties of it already! It is made from a green earth and is valued at a sesterce per pound. XXX. The other colour is that called 'ring-white,' which is used to give brilliance of complexion in paintings of women.[d] This itself also is made from white earth mixed with glass stones from the rings of the lower classes, which accounts for the name 'ring-white.'

XXXI. Of all the colours those which love a dry surface of white clay, and refuse to be applied to a damp plaster, are purple, indigo, blue, Melian, orpiment, Appian[c] and ceruse. Wax is stained with these same colours for encaustic paintings, a

[d] Or 'which shines on the painted faces of women' (K. C. Bailey). Cf. § 46 and note [d] on p. 295.

picturas, quae inuruntur, alieno parietibus genere, sed classibus familiari, iam vero et onerariis navibus, quoniam et vehicula[1] expingimus, ne quis miretur et rogos pingi, iuvatque pugnaturos ad mortem aut certe caedem speciose vehi. Qua contemplatione tot colorum tanta varietate subit antiquitatem mirari.

50 XXXII. Quattuor coloribus solis immortalia illa opera fecere—ex albis Melino, e silaciis Attico, ex rubris Sinopide Pontica, ex nigris atramento—Apelles, Aetion,[2] Melanthius, Nicomachus, clarissimi pictores, cum tabulae eorum singulae oppidorum venirent opibus. nunc et purpuris in parietes migrantibus et India conferente fluminum suorum limum, draconum elephantorumque saniem nulla nobilis pictura est. omnia ergo meliora tunc fuere, cum minor copia. ita est, quoniam, ut supra diximus, rerum, non animi pretiis excubatur.

51 XXXIII. Et nostrae aetatis insaniam in pictura non omittam. Nero princeps iusserat colosseum se pingi cxx pedum linteo, incognitum ad hoc tempus. ea pictura, cum peracta esset in Maianis hortis, accensa fulmine cum optima hortorum parte con-
52 flagravit. libertus eius, cum daret Anti munus gladiatorium, publicas porticus occupavit pictura, ut constat,

[1] vehicula *coni. Mayhoff*: fericula *Detlefsen*: pericula.
[2] Aetion *Ian*: etion *cdd.* (echion *cd. Par.* 6801).

[a] Cicero, *Brutus*, 70 says it was Zeuxis, Polygnotus, Timanthes and others who used four colours only, while in Aetion, Nicomachus, Protogenes, and Apelles everything had been brought to perfection. But the Alexander mosaic reproduces a four-colour original.

[b] Indigo (see § 46) and dragon's blood, which latter is really a plant-product got chiefly from a species of *Dracaena* or *Pterocarpus* in Socotra.

sort of process which cannot be applied to walls but is common for ships of the navy, and indeed nowadays also for cargo vessels, since we even decorate vehicles with paintings, so that no one need be surprised that even logs for funeral pyres are painted; and we like gladiators going into the fray to ride in splendour to the scene of their death or at all events of carnage. Thus to contemplate all these numbers and great variety of colours prompts us to marvel at former generations.

XXXII. Four colours [a] only were used by the illustrious painters Apelles, Aetion, Melanthius and Nicomachus to execute their immortal works—of whites, Melinum; of yellow ochres, Attic; of reds, Pontic Sinopis; of blacks, atramentum—although their pictures each sold for the wealth of a whole town. Nowadays when purple finds its way even on to party-walls and when India contributes [b] the mud of her rivers and the gore of her snakes and elephants, there is no such thing as high-class painting. Everything in fact was superior in the days when resources were scantier. The reason for this is that, as we said before, it is values of § 4.
material and not of genius that people are now on the look-out for.

Colossal painting of Nero, A.D. 54–68.

XXXIII. One folly of our generation also in the matter of painting I will not leave out. The Emperor Nero had ordered his portrait to be painted on a colossal scale, on linen 120 ft. high, a thing unknown hitherto; this picture when finished, in the Gardens of Maius, was struck by lightning and destroyed by fire, together with the best part of the Gardens. When a freedman of Nero was giving at Anzio a gladiatorial show, the public porticoes were

gladiatorum ministrorumque omnium veris imaginibus redditis. hic multis iam saeculis summus animus[1] in pictura, pingi autem gladiatoria munera atque in publico exponi coepta a C. Terentio Lucano. is avo suo, a quo adoptatus fuerat, triginta paria in foro per triduum dedit tabulamque pictam in nemore Dianae posuit.

53 XXXIV. Nunc celebres in ea arte quam maxima brevitate percurram, neque enim instituti operis est talis[2] executio; itaque quosdam vel[3] in transcursu et in aliorum mentione obiter nominasse satis erit, exceptis operum claritatibus quae et ipsa conveniet attingi, sive exstant sive intercidere.

54 Non constat sibi in hac parte Graecorum diligentia multas post olumpiadas celebrando pictores quam statuarios ac toreutas, primumque olympiade LXXXX, cum et Phidian ipsum initio pictorem fuisse tradatur clipeumque Athenis ab eo pictum, praeterea in confesso sit LXXX tertia fuisse fratrem eius Panaenum, qui clipeum intus pinxit Elide Minervae, quam fecerat Colotes, discipulus Phidiae et ei in faciendo
55 Iove Olympio adiutor. quid? quod in confesso perinde est Bularchi pictoris tabulam, in qua erat Magnetum proelium, a Candaule, rege Lydiae

[1] ambitus *coni. Mayhoff.*
[2] talis *B, cd. Par. Lat.* 6797: iatis *rell.* (ampla *cd. Par.* 6801): artis *coni. Mayhoff.*
[3] *V.l.* velut.

[a] Probably not that of Athene Parthenos, which was, on its inner side, carved in relief.

covered with paintings, so we are told, containing life-like portraits of all the gladiators and assistants. This portraiture of gladiators has been the highest interest in art for many generations now; but it was Gaius Terentius Lucanus who began the practice of having pictures made of gladiatorial shows and exhibited in public; in honour of his grandfather who had adopted him he provided thirty pairs of gladiators in the forum for three consecutive days, and exhibited a picture of their matches in the Grove of Diana.

XXXIV. I will now run through as briefly as possible the artists eminent in painting; and it is not consistent with the plan of this work to go into such detail; and accordingly it will be enough just to give the names of some of them even in passing and in course of mentioning others, with the exception of the famous works of art which whether still extant or now lost it will be proper to particularize. *Famous painters*

In this department the exactitude of the Greeks is inconsistent, in placing the painters many Olympiads after the sculptors in bronze and chasers in metal, and putting the first in the 90th Olympiad, although it is said that even Phidias himself was a painter to begin with, and that there was a shield [a] at Athens that had been painted by him; and although moreover it is universally admitted that his brother Panaenus came in the 83rd Olympiad, who painted the inner surface of a shield of Athene at Elis made by Colotes, Phidias's pupil and assistant in making the statue of Olympian Zeus. And then, is it not equally admitted that Candaules, the last King of Lydia of the Heraclid line, who was also commonly known by the name of Myrsilus, gave its weight in *Chronology.* 420–417 B.C. *Panaenus and others.* 448–445 B.C.

Heraclidarum novissimo, qui et Myrsilus vocitatus est, repensam auro? tanta iam dignatio picturae erat. circa Romuli id aetatem acciderit necesse est, etenim duodevicensima olympiade interiit Candaules aut, ut quidam tradunt, eodem anno quo Romulus, nisi fallor, manifesta iam tunc claritate
56 artis, adeo absolutione.[1] quod si recipi necesse est, simul apparet multo vetustiora principia eosque, qui monochromatis pinxerint, quorum aetas non traditur, aliquanto ante fuisse, Hygiaenontem, Dinian, Charmadan et, qui primus in pictura marem a femina discreverit, Eumarum Atheniensem, figuras omnes imitari ausum, quique inventa eius excoluerit, Cimonem Cleonaeum. hic catagrapha invenit, hoc est obliquas imagines, et varie formare voltus, respicientes suspicientesve vel despicientes; articulis membra distinxit, venas protulit, praeterque
57 in vestibus rugas[2] et sinus invenit. Panaenus quidem frater Phidiae etiam proelium Atheniensium adversus Persas apud Marathona factum pinxit.

[1] *V.ll.* absolutioni (*B*) *aut* absolutiore: non absolutae *Brotier.*

[2] vestibus rugas *Traube*: veste et rugas *Gelen*: veste brugas *B*[1]: veste rugas *B*[2], *cd. Tolet.*: verrugas *rell.*

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[a] An unknown event; it might be the defeat of the Greeks mentioned in VII, 126; or more likely the great defeat of the Magnetes by the Treres in 651 B.C. (Strabo XIV, 647).

[b] Candaules was in fact put to death by Gyges about 685 B.C.

[c] See §§ 29, 15.

[d] By painting women's skin paler or white. This is the stage represented by vase-painting from the seventh century when women were commonly coloured white, men red or black.

gold for a picture of the painter Bularchus representing a battle [a] with the Magnetes? So high was the value already set on the art of painting. This must have occurred at about the time of Romulus, since Candaules [b] died in the 18th Olympiad, or, 708–705 B.C. according to some accounts, in the same year as Romulus, making it clear, if I am not mistaken, *trad.* 717 B.C. that the art had already achieved celebrity, and in fact a perfection. And if we are bound to accept this conclusion, it becomes clear at the same time that the first stages were at a much earlier date and that the painters in monochrome,[c] whose date is not handed down to us, came considerably earlier—Hygiaenon, Dinias, Charmadas and Eumarus of Athens, the last being the earliest artist to distinguish [d] the male from the female sex in painting, and venturing to reproduce every sort of figure; and Cimon of Cleonae who improved on the inventions of Eumarus. It was Cimon who first invented 'catagrapha,' that is, images in 'three-quarter,' [e] and who varied the aspect of the features, representing them as looking backward or upward or downward; he showed the attachments of the limbs, displayed the veins, and moreover introduced wrinkles and folds in the drapery. Indeed the brother of Phidias Panaenus even painted [f] the Battle at Marathon 490 B.C. between the Athenians and Persians; so widely

[e] The Greek word meant probably 'foreshortened images,' but Pliny or his Latin source rightly took it as expressing 'slanting (*obliquus*) images not profile or full-face.' Cf. § 90. The context may exclude from the word *obliquus* any portraits where the eyes look back, up, or down.

[f] On a wooden panel attached to a wall of the στοὰ ποικίλη, 'Painted Portico,' at Athens. The painting was attributed also to Polygnotus and to Micon; cf. § 59.

adeo iam colorum usus increbruerat adeoque ars perfecta erat, ut in eo proelio iconicos duces pinxisse tradatur, Atheniensium Miltiadem, Callimachum, Cynaegirum, barbarorum Datim, Artaphernen.
58 XXXV. Quin immo certamen etiam picturae florente eo institutum est Corinthi ac Delphis, primusque omnium certavit cum Timagora Chalcidense, superatus ab eo Pythiis, quod et ipsius Timagorae carmine vetusto apparet, chronicorum errore non dubio.

Alii quoque post hos clari fuere ante LXXXX olympiadem, sicut Polygnotus Thasius, qui primus mulieres tralucida[1] veste pinxit, capita earum mitris versicoloribus operuit plurimumque picturae primus contulit, siquidem instituit os adaperire, dentes ostendere, voltum ab antiquo rigore variare.
59 huius est tabula in porticu Pompei, quae ante curiam eius fuerat, in qua dubitatur ascendentem cum clupeo pinxerit an descendentem. hic Delphis aedem pinxit, hic et Athenis porticum, quae Poecile vocatur, gratuito, cum partem eius Micon mercede pingeret. vel maior huic auctoritas, siquidem Amphictyones, quod est publicum Graeciae concilium,

[1] tralucida *B*: lucida *rell.*

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[a] Not real portraits if the στοὰ was built at least thirty years after 490 B.C.

[b] The Λέσχη, a covered colonnade.

[c] Polygnotus' contribution was a 'Sack of Troy,' Micon's a 'Battle of the Amazons' (against Theseus). See also § 57.

established had the employment of colour now become and such perfection of art had been attained that he is said to have introduced actual [a] portraits of the generals who commanded in that battle, Miltiades, Callimachus and Cynaegirus on the Athenian side and Datis and Artaphernes on that of the barbarians. XXXV. Nay more, during the time that Panaenus flourished competitions in painting were actually instituted at Corinth and at Delphi, and on the first occasion of all Panaenus competed against Timagoras of Chalcis, being defeated by him, at the Pythian Games, a fact clearly shown by an ancient poem of Timagoras himself, the chronicles undoubtedly being in error.

After those and before the 90th Olympiad there were other celebrated painters also, such as Polygnotus of Thasos who first represented women in transparent draperies and showed their heads covered with a parti-coloured headdress; and he first contributed many improvements to the art of painting, as he introduced showing the mouth wide open and displaying the teeth and giving expression to the countenance in place of the primitive rigidity. There is a picture by this artist in the Portico of Pompeius which formerly hung in front of the Curia which he built, in which it is doubtful whether the figure of a man with a shield is painted as going up or as coming down. Polygnotus painted the temple [b] at Delphi and the colonnade at Athens called the Painted Portico, doing his work gratuitously, although a part of the work was painted by Micon who received a fee.[c] Indeed Polygnotus was held in higher esteem, as the Amphictyones, who are a General Council of Greece, voted him entertainment

420–417 B.C.

Polygnotus and Micon.

hospitia ei gratuita decrevere. Fuit et alius Micon, qui minoris cognomine distinguitur, cuius filia Timarete et ipsa pinxit.

60 XXXVI. LXXXX autem olympiade fuere Aglaophon, Cephisodorus, Erillus,[1] Euenor, pater Parrhasii et praeceptor maximi pictoris, de quo suis annis dicemus, omnes iam inlustres, non tamen in quibus haerere expositio debeat festinans ad lumina artis, in quibus primus refulsit Apollodorus Atheniensis LXXXXIII olympiade. hic primus species exprimere instituit primusque gloriam penicillo iure contulit. eius est sacerdos adorans et Aiax fulmine incensus, quae Pergami spectatur hodie. neque ante eum tabula ullius ostenditur, quae teneat oculos.

61 Ab hoc artis fores apertas Zeuxis Heracleotes intravit olympiadis LXXXXV anno quarto, audentemque iam aliquid penicillum—de hoc enim adhuc loquamur—ad magnam gloriam perduxit, a quibusdam falso in LXXXXVIIII olympiade positus, cum fuisse [2] necesse est Demophilum Himeraeum et Nesea Thasium, quoniam utrius eorum discipulus fuerit ambigitur.
62 in eum Apollodorus supra scriptus versum fecit, artem ipsis ablatam Zeuxim ferre secum. opes quoque tantas adquisivit, ut in ostentatione [3] earum

[1] Erillus *B*: frilius *rell.* (frillus *cd. Par. Lat.* 6797): Phryllus *Brotier*: Phrylus *edd. vett.*: Herillus *coni. Sillig.*
[2] cum quo f. *Urlichs*: confuisse *Traube.*
[3] ostentationem *Gronov.*

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[a] Inventor of shading, and therefore called σκιαγράφος.

at the public expense. There was also another Micon, distinguished from the first by the surname of 'the Younger,' whose daughter Timarete also painted.

XXXVI. In the 90th Olympiad lived Aglaophon, Cephisodorus, Erillus, and Evenor the father and teacher of Parrhasius, a very great painter (about Parrhasius we shall have to speak when we come to his period). All these are now artists of note, yet not figures over which our discourse should linger in its haste to arrive at the luminaries of the art; first among whom shone out Apollodorus[a] of Athens, in the 93rd Olympiad. Apollodorus was the first artist to give realistic presentation of objects, and the first to confer glory as of right upon the paint brush. His are the Priest at Prayer and Ajax struck by Lightning, the latter to be seen at Pergamum at the present day. There is no painting now on view by any artist before Apollodorus that arrests the attention of the eyes.

420–417 B.C. *Apollodorus and others.*

§ 67.

408–405 B.C.

The gates of art having been now thrown open by Apollodorus they were entered by Zeuxis of Heraclea in the 4th year of the 95th Olympiad, who led forward the already not unadventurous paintbrush—for this is what we are still speaking of—to great glory. Some writers erroneously place Zeuxis in the 89th Olympiad, when Demophilus of Himera and Neseus of Thasos must have been his contemporaries, as of one of them, it is uncertain which, he was a pupil. Of Zeuxis, Apollodorus above recorded wrote an epigram in a line of poetry to the effect that 'Zeuxis robbed his masters of their art and carried it off with him.' Also he acquired such great wealth that he advertised it at Olympia by displaying his own

Zeuxis.

400–397 B.C.

424–421 B.C.

Olympiae aureis litteris in palliorum tesseris intextum nomen suum ostentaret. postea donare opera sua instituit, quod nullo pretio satis digno permutari[1] posse diceret, sicuti Alcmenam Agragantinis, Pana Archelao.
63 fecit et Penelopen, in qua pinxisse mores videtur, et athletam; adeoque in illo sibi placuit, ut versum subscriberet celebrem ex eo, invisurum aliquem facilius quam imitaturum. magnificus est et Iuppiter eius in throno adstantibus diis et Hercules infans dracones II[2] strangulans Alcmena matre coram pavente et Amphitryone.
64 reprehenditur tamen ceu grandior in capitibus articulisque, alioqui tantus diligentia, ut Agragantinis facturus tabulam, quam in templo Iunonis Laciniae publice dicarent, inspexerit virgines eorum nudas et quinque elegerit, ut quod in quaque laudatissimum esset pictura redderet. pinxit et monochromata ex albo. aequales eius et aemuli fuere Timanthes, Androcydes, Eupompus, Parrhasius.
65 descendisse hic in certamen cum Zeuxide traditur et, cum ille detulisset uvas pictas tanto successu, ut in scaenam aves advolarent, ipse detulisse linteum pictum ita veritate repraesentata, ut Zeuxis alitum iudicio tumens flagitaret tandem remoto linteo

[1] permutari *B*? : permutare *rell.*

[2] dracones II *Mayhoff*: draconem *B*: dracones *cd. Par.* 6801 : dracones in *rell.*

[a] King of Macedonia 413–399 B.C.

[b] Μωμήσεταί τις μᾶλλον ἢ μιμήσεται.

[c] Fingers and toes?

[d] Apparently a 'Helen (cf. § 66),' painted in fact for the city of Croton (Cic. *De Invent.* II, 1, 1; Dionys. Hal., *De Vet. Script. Cens.* I).

[e] Apparently paintings in pale colours on a dark ground.

[f] The pictures were hung on the front of the stage buildings in the theatre.

name embroidered in gold lettering on the checked pattern of his robes. Afterwards he set about giving away his works as presents, saying that it was impossible for them to be sold at any price adequate to their value: for instance he presented his Alcmena to the city of Girgenti and his Pan to Archelaus.[a] He also did a Penelope in which the picture seems to portray morality, and an Athlete, in the latter case being so pleased with his own work that he wrote below it a line of verse[b] which has hence become famous, to the effect that it would be easier for someone to carp at him than to copy him. His Zeus seated on a throne with the gods standing by in attendance is also a magnificent work, and so is the Infant Heracles throttling two Snakes in the presence of his mother Alcmena, looking on in alarm, and of Amphitryon. Nevertheless Zeuxis is criticized for making the heads and joints[c] of his figures too large in proportion, albeit he was so scrupulously careful that when he was going to produce a picture[d] for the city of Girgenti to dedicate at the public cost in the temple of Lacinian Hera he held an inspection of maidens of the place paraded naked and chose five, for the purpose of reproducing in the picture the most admirable points in the form of each. He also painted monochromes in white.[e] His contemporaries and rivals were Timanthes, Androcydes, Eupompus and Parrhasius. This last, it is recorded, entered into a competition with Zeuxis, who produced a picture of grapes so successfully represented that birds flew up to the stage-buildings[f]; whereupon Parrhasius himself produced such a realistic picture of a curtain that Zeuxis, proud of the verdict of the birds, requested that the curtain should now

Zeuxis and Parrhasius.

ostendi picturam atque intellecto errore concederet palmam ingenuo pudore, quoniam ipse volucres
66 fefellisset, Parrhasius autem se artificem. fertur et postea Zeuxis pinxisse puerum uvas ferentem, ad quas cum advolassent aves,[1] eadem ingenuitate processit iratus operi et dixit: 'uvas melius pinxi quam puerum, nam si et hoc consummassem, aves timere debuerant.' fecit et figlina opera, quae sola in Ambracia relicta sunt, cum inde Musas Fulvius Nobilior Romam transferret. Zeuxidis manu Romae Helena est in Philippi porticibus, et in Concordiae delubro Marsyas religatus.

67 Parrhasius Ephesi natus et ipse multa contulit. primus symmetrian picturae dedit, primus argutias voltus, elegantiam capilli, venustatem [2] oris, confessione artificum in liniis extremis palmam adeptus. haec est picturae summa subtilitas.[3] corpora enim pingere et media rerum est quidem magni operis, sed in quo multi gloriam tulerint; extrema corporum facere et desinentis picturae modum includere
68 rarum in successu artis invenitur. ambire enim se ipsa debet extremitas et sic desinere, ut promittat alia et [4] post se [5] ostendatque etiam quae occultat. hanc ei gloriam concessere Antigonus et Xenocrates,

[1] *V.l.* advolarent aves *aut* advolasset avis *aut* advolaret avis.
[2] *V.l.* vetustatem.
[3] suptilitas *B*: sublimitas *rell.*
[4] alia et *Mayhoff*: aliae *cd. Leid. Voss. m.*1: alia *rell.*
[5] posse *edd. vett.*: pone se *coni. Ian*: alias post se *Traube.*

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[a] The picture 'Helen' mentioned (not named) in § 64. The porticoes were built by L. Marcius Philippus in 29 B.C.

be drawn and the picture displayed; and when he realized his mistake, with a modesty that did him honour he yielded up the prize, saying that whereas he had deceived birds Parrhasius had deceived him, an artist. It is said that Zeuxis also subsequently painted a Child Carrying Grapes, and when birds flew to the fruit with the same frankness as before he strode up to the picture in anger with it and said, 'I have painted the grapes better than the child, as if I had made a success of that as well, the birds would inevitably have been afraid of it.' He also executed works in clay, the only works of art that were left at Ambracia when Fulvius Nobilior removed 189 B.C. the statues of the Muses from that place to Rome. There is at Rome a Helena [a] by Zeuxis in the Porticoes of Philippus, and a Marsyas Bound, in the Shrine of Concord.

Parrhasius also, a native of Ephesus, contributed *Parrhasius* much to painting. He was the first to give proportions to painting and the first to give vivacity to the expression of the countenance, elegance of the hair and beauty of the mouth; indeed it is admitted by artists that he won the palm in the drawing of outlines. This in painting is the high-water mark of refinement; to paint bulk and the surface within the outlines, though no doubt a great achievement, is one in which many have won distinction, but to give the contour of the figures, and make a satisfactory boundary where the painting within finishes, is rarely attained in successful artistry. For the contour ought to round itself off and so terminate as to suggest the presence of other parts behind it also, and disclose even what it hides. This is the distinction conceded to Parrhasius by

qui de pictura scripsere, praedicantes quoque, non
solum confitentes; et alias multa graphidis vestigia
exstant in tabulis ac membranis eius, ex quibus pro-
ficere dicuntur artifices. minor tamen videtur sibi
69 comparatus in mediis corporibus exprimendis. pinxit
demon Atheniensium argumento quoque ingenioso.
ostendebat namque varium iracundum iniustum
inconstantem,[1] eundem exorabilem clementem
misericordem; gloriosum . . . ,[2] excelsum humilem,
ferocem fugacemque et omnia pariter. idem pinxit
et Thesea, quae Romae in Capitolio fuit, et nauar-
chum thoracatum, et in una tabula, quae est Rhodi,
Meleagrum, Herculem, Persea; haec ibi ter fulmine
ambusta neque obliterata hoc ipso miraculum auget.
70 pinxit et archigallum, quam picturam amavit Ti-
berius princeps atque, ut auctor est Deculo,[3] HS
|LX|[4] aestimatam cubiculo suo inclusit. pinxit
et Thressam[5] nutricem infantemque in manibus
eius et Philiscum et Liberum patrem adstante
Virtute, et pueros duos, in quibus spectatur securitas
aetatis et simplicitas, item sacerdotem adstante
71 puero cum acerra et corona. sunt et duae picturae
eius nobilissimae, hoplites in certamine ita decur-
rens, ut sudare videatur, alter arma deponens, ut

[1] incontinentem *O. Jahn.*
[2] *lac. Mayhoff.*
[3] deculo *B*: depulo, de populo *aut sim. rell.*: Decius *Gelen*: Decius Epulo *edd. vett.*: Decius Eculeo *Hermolaus Barbarus.*
[4] |LX| *Ian*: LX *B*: LX *rell.*
[5] thressam *B*: cressam *aut* chressam *rell.*

[a] Or 'traces of his draughtsmanship.'
[b] Or 'them in various moods.'
Until it perished in the fire of 70 B.C.

Antigonus and Xenocrates who have written on the art of painting, and they do not merely admit it but actually advertise it. And there are many other pen-sketches [a] still extant among his panels and parchments, from which it is said that artists derive profit. Nevertheless he seems to fall below his own level in giving expression to the surface of the body inside the outline. His picture of the People of Athens also shows ingenuity in treating the subject, since he displayed them as fickle, [b] choleric, unjust and variable, but also placable and merciful and compassionate, boastful ⟨and . . . . ⟩, lofty and humble, fierce and timid—and all these at the same time. He also painted a Theseus which was once [c] in the Capitol at Rome, and a Naval Commander in a Cuirass, and in a single picture now at Rhodes figures of Meleager, Heracles and Perseus. This last picture has been three times struck by lightning at Rhodes without being effaced, a circumstance which in itself enhances the wonder felt for it. He also painted a High Priest of Cybele, a picture for which the Emperor Tiberius conceived an affection and kept A.D. 14–37. it shut up in his bedchamber, the price at which it was valued according to Deculo being 6,000,000 sesterces. He also painted a Thracian Nurse with an Infant in her Arms, a Philiscus, and a Father Liber or Dionysus attended by Virtue, and Two Children in which the carefree simplicity of childhood is clearly displayed, and also a Priest attended by Boy with Incense-box and Chaplet. There are also two very famous pictures by him, a Runner in the Race in Full Armour who actually seems to sweat with his efforts, and the other a Runner in Full Armour Taking off his Arms, so lifelike that he can

anhelare sentiatur. laudantur et Aeneas Castorque ac Pollux in eadem tabula, item Telephus, Achilles, Agamemnon, Ulixes. fecundus artifex, sed quo nemo insolentius usus sit gloria artis, namque et cognomina usurpavit habrodiaetum se appellando aliisque versibus principem artis et eam ab se consummatam, super omnia Apollinis se radice ortum et Herculem, qui est Lindi, talem a se pictum, qualem
72 saepe in quiete vidisset; et cum [1] magnis suffragiis superatus a Timanthe esset [2] Sami in Aiace armorumque iudicio, herois nomine se moleste ferre dicebat, quod iterum ab indigno victus esset—Pinxit et minoribus tabellis libidines, eo genere petulantis ioci se reficiens.[3]

73 Nam Timanthis vel plurimum adfuit ingenii. eius enim est Iphigenia oratorum laudibus celebrata, qua stante ad aras peritura cum maestos pinxisset omnes praecipueque patruum et tristitiae omnem imaginem consumpsisset, patris ipsius voltum velavit,
74 quem digne non poterat ostendere. sunt et alia ingenii eius exempla, veluti Cyclops dormiens in parvola tabella, cuius et sic magnitudinem exprimere cupiens pinxit iuxta Satyros thyrso pollicem eius

[1] et cū (= cum) *Mayhoff*: ergo.

[2] Timanthe esset *Mayhoff*: timanthesest B^1: timanthe (*aut* thimante) est *cdd.*

[3] pinxit . . . reficiens *post* Ulixes 71 *transp. Urlichs.*

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[a] Showing the healing of Telephus by rust from Achilles' sword, with Agamemnon and Odysseus looking on.

[b] When the arms of dead Achilles were awarded to Odysseus, Ajax became mad and at night unknowingly killed sheep in the belief that he was killing his enemies.

[c] *E.g.* Cicero, *De Oratore* 74.

[d] A picture found at Pompeii may be a copy of this.

be perceived to be panting for breath. His Aeneas, Castor and Pollux (Polydeuces), all in the same picture, are also highly praised, and likewise his group[a] of Telephus with Achilles, Agamemnon and Odysseus. Parrhasius was a prolific artist, but one who enjoyed the glory of his art with unparalleled arrogance, for he actually adopted certain surnames, calling himself the 'Bon Viveur,' and in some other verses 'Prince of Painters,' who had brought the art to perfection, and above all saying he was sprung from the lineage of Apollo and that his picture of Heracles at Lindos presented the hero as he had often appeared to him in his dreams. Consequently when defeated by Timanthes at Samos by a large majority of votes, the subject of the pictures being Ajax and the Award of the Arms, he used to declare in the name of his hero that he was indignant at having been defeated a second time by an unworthy opponent.[b] He also painted some smaller pictures of an immodest nature, taking his recreation in this sort of wanton amusement.

Timanthes.

To return to Timanthes—he had a very high degree of genius. Orators[c] have sung the praises of his Iphigenia,[d] who stands at the altar awaiting her doom; the artist has shown all present full of sorrow, and especially her uncle,[e] and has exhausted all the indications of grief, yet has veiled the countenance of her father himself,[f] whom he was unable adequately to portray. There are also other examples of his genius, for instance a quite small panel of a Sleeping Cyclops, whose gigantic stature he aimed at representing even on that scale by painting at his side some Satyrs measuring the size of his thumb

[e] Menelaus. [f] Agamemnon.

metientes. atque in unius huius operibus intelligitur plus semper quam pingitur et, cum sit ars summa, ingenium tamen ultra artem est. pinxit et heroa absolutissimi operis, artem ipsam complexus viros pingendi, quod opus nunc Romae in templo Pacis est.

75 Euxinidas hac aetate docuit Aristiden, praeclarum artificem, Eupompus Pamphilum, Apellis praeceptorem. est Eupompi victor certamine gymnico palmam tenens. ipsius auctoritas tanta fuit, ut diviserit picturam[1]: genera, quae ante eum duo fuere—Helladicum et Asiaticum[2] appellabant—, propter hunc, qui erat Sicyonius, diviso Helladico tria facta sunt, Ionicum, Sicyonium, Atticum.

76 Pamphili cognatio et proelium ad Phliuntem ac victoria Atheniensium, item Ulixes in rate. ipse Macedo natione, sed . . .[3] primus in pictura omnibus litteris eruditus, praecipue arithmetica et geometria, sine quibus negabat artem perfici posse, docuit neminem talento minoris—annuis X D[4]—, quam mercedem at Apelles et Melanthius dedere ei.

77 huius auctoritate effectum est Sicyone primum, deinde in tota Graecia, ut pueri ingenui omissam

[1] picturam *Mayhoff*: picturam in *cdd.* (-ras in *cd. Par.* 6801: -a in *cd. Leid. Voss.*).

[2] asiaticum *B*: asianum *B*[1]?: asiticum quod asiaticum *rell.*: quod asiaticum *Gelen.*

[3] *lac. Mayhoff.*

[4] X D *B, cd. Leid. Voss.*: D *rell.* (*om. cd. Flor. Ricc.*).

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[a] The elder; cf. §§ 108, 111 and note on pp. 410–411.

[b] Possibly the capture of Phlius by the Spartans in 379 B.C. and the sea-victory of Athens over the Spartans at Naxos in

with a wand. Indeed Timanthes is the only artist in whose works more is always implied than is depicted, and whose execution, though consummate, is always surpassed by his genius. He painted a hero which is a work of supreme perfection, in which he has included the whole art of painting male figures; this work is now in the Temple of Peace in Rome.

Eupompus and Pamphilus

It was at this period that Euxinidas had as his pupil the famous artist Aristides,[a] that Eupompus taught Pamphilus who was the instructor of Apelles. A work of Eupompus is a Winner in a Gymnastic Contest holding a Palm branch. Eupompus's own influence was so powerful that he made a fresh division of painting; it had previously been divided into two schools, called the Helladic or Grecian and the Asiatic, but because of Eupompus, who was a Sicyonian, the Grecian school was sub-divided into three groups, the Ionic, Sicyonian and Attic. To Pamphilus belong Family Group, and a Battle at Phlius and a Victory of the Athenians,[b] and also Odysseus on his Raft. He was himself a Macedonian by birth, but ⟨was brought up at Sicyon, and⟩ was the first painter highly educated in all branches of learning, especially arithmetic and geometry, without the aid of which he maintained art could not attain perfection. He took no pupils at a lower fee than a talent, at the rate of 500 drachmae per annum,[c] and this was paid him by both Apelles and Melanthius. It was brought about by his influence, first at Sicyon and then in the whole of Greece as well, that children

376, or the defeat of Sicyonians by Phliasians and Athenians in 367 B.C. The painting may have represented the last event only.

[c] So that the course of study could last 12 years.

ante[1] graphicen [hoc est picturam[2]] in buxo, docerentur recipereturque ars ea in primum gradum liberalium. semper quidem honos ei fuit, ut ingenui eam exercerent, mox ut honesti, perpetuo interdicto ne servitia docerentur. ideo neque in hac neque in toreutice ullius, qui servierit, opera celebrantur.

78 Clari et centesima septima olympiade exstitere Aetion ac Therimachus. Aetionis sunt nobiles picturae Liber pater, item Tragoedia et Comoedia, Semiramis ex ancilla regnum apiscens, anus lampadas praeferens et nova nupta verecundia notabilis.

79 Verum omnes prius genitos futurosque postea superavit Apelles Cous olympiade centesima duodecima. picturae plura solus prope quam ceteri omnes contulit, voluminibus etiam editis, quae doctrinam eam continent. praecipua eius in arte venustas fuit, cum eadem aetate maximi pictores essent; quorum opera cum admiraretur, omnibus conlaudatis deesse illam suam venerem[3] dicebat, quam Graeci χάριτα vocant; cetera omnia contigisse,
80 sed hac sola sibi neminem parem. et aliam gloriam usurpavit, cum Protogenis opus inmensi laboris ac

[1] omissā (= omissam) ante *coni. Mayhoff*: omnia ante *B*: omnia anti *rell.*: ante omnia *edd. vett.*: omnes artem *C. F. Hermann.*

[2] *seclud. Urlichs.*

[3] venustatem *Fröhner* (*cp.* gratiam *Quintil.* XII. 10. 6).

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[a] The whole of statuary as contrasted with painting.

[b] Sammuramat, princess of Assyria *c.* 800 B.C.

[c] Really of Ephesus, but some of his famous works were at Cos.

of free birth were given lessons in drawing on boxwood, which had not been included hitherto, and that this art was accepted into the front rank of the liberal sciences. And it has always consistently had the honour of being practised by people of free birth, and later on by persons of station, it having always been forbidden that slaves should be instructed in it. Hence it is that neither in painting nor in the art of statuary [a] are there any famous works that were executed by any person who was a slave.

In the 107th Olympiad Aetion and Therimachus also attained outstanding distinction. Famous paintings by Aetion are a Father Liber or Dionysus, Tragedy and Comedy and Semiramis [b] the Slave Girl Rising to a Throne; and the Old Woman carrying Torches, with a Newly Married Bride, remarkable for her air of modesty. 352–349 B.C. *Aetion and Therimachus.*

But it was Apelles of Cos [c] who surpassed all the painters that preceded and all who were to come after him; he dates in the 112th Olympiad. He singly contributed almost more to painting than all the other artists put together, also publishing volumes containing the principles of painting. His art was unrivalled for graceful charm, although other very great painters were his contemporaries. Although he admired their works and gave high praise to all of them, he used to say that they lacked the glamour that his work possessed, the quality denoted by the Greek word *charis*, and that although they had every other merit, in that alone no one was his rival. He also asserted another claim to distinction when he expressed his admiration for the immensely laborious and infinitely meticulous work *Apelles.* 332–329 B.C. *Apelles and Protogenes.*

curae supra modum anxiae miraretur; dixit enim omnia sibi cum illo paria esse aut illi meliora, sed uno se praestare, quod manum de tabula sciret[1] tollere, memorabili praecepto nocere saepe nimiam diligentiam. fuit autem non minoris simplicitatis quam artis. Melanthio dispositione cedebat, Asclepiodoro de[2] mensuris, hoc est quanto quid a quoque distare deberet.

81 Scitum inter Protogenen et eum quod accidit. ille Rhodi vivebat, quo cum Apelles adnavigasset, avidus cognoscendi opera eius fama tantum sibi cogniti, continuo officinam petiit. aberat ipse, sed tabulam amplae magnitudinis in machina aptatam una[3] custodiebat anus. haec foris esse Protogenen respondit interrogavitque, a quo quaesitum diceret. 'ab hoc,' inquit Apelles adreptoque penicillo lineam
82 ex colore duxit summae tenuitatis per tabulam. et reverso Protogeni quae gesta erant anus indicavit. ferunt artificem protinus contemplatum subtilitatem dixisse Apellen venisse, non cadere in alium tam absolutum opus; ipsumque alio colore tenuiorem lineam in ipsa illa duxisse abeuntemque praecepisse, si redisset ille, ostenderet adiceretque

[1] sciret *B*: non sciret *rell.*
[2] de *fortasse delendum* (*Mayhoff, qui et* dimensuris *coni.*).
[3] una *B*: picturae una *rell.*

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[a] The expression '*manum de tabula*,' 'hand from the picture,' was a saying which expressed 'That's enough.'

[b] Pliny does not say whether it was straight or wavy, or an outline of some object.

of Protogenes; for he said that in all respects his achievements and those of Protogenes were on a level, or those of Protogenes were superior, but that in one respect he stood higher, that he knew when to take his hand away from a picture [a]—a noteworthy warning of the frequently evil effects of excessive diligence. The candour of Apelles was however equal to his artistic skill: he used to acknowledge his inferiority to Melanthius in grouping, and to Asclepiodorus in nicety of measurement, that is in the proper space to be left between one object and another.

A clever incident took place between Protogenes and Apelles. Protogenes lived at Rhodes, and Apelles made the voyage there from a desire to make himself acquainted with Protogenes's works, as that artist was hitherto only known to him by reputation. He went at once to his studio. The artist was not there but there was a panel of considerable size on the easel prepared for painting, which was in the charge of a single old woman. In answer to his enquiry, she told him that Protogenes was not at home, and asked who it was she should report as having wished to see him. 'Say it was this person,' said Apelles, and taking up a brush he painted in colour across the panel an extremely fine line [b]; and when Protogenes returned the old woman showed him what had taken place. The story goes that the artist, after looking closely at the finish of this, said that the new arrival was Apelles, as so perfect a piece of work tallied with nobody else; and he himself, using another colour, drew a still finer line exactly on the top of the first one, and leaving the room told the attendant to show it to the

hunc esse quem quaereret. atque ita evenit. revertit enim Apelles et vinci erubescens tertio colore lineas secuit nullum relinquens amplius
83 subtilitati locum. at Protogenes victum se confessus in portum devolavit hospitem quaerens, placuitque sic eam tabulam posteris tradi omnium quidem, sed artificum praecipuo miraculo. consumptam eam priore incendio Caesaris domus in Palatio audio, spectatam nobis [1] ante, spatiose [2] nihil aliud continentem quam [3] lineas visum effugientes, inter egregia multorum opera inani similem et eo ipso allicientem omnique opere nobiliorem.

84 Apelli fuit alioqui perpetua consuetudo numquam tam occupatum diem agendi, ut non lineam ducendo exerceret artem, quod ab eo in proverbium venit. idem perfecta opera proponebat in pergula transeuntibus atque, ipse post tabulam latens, vitia quae notarentur auscultabat, vulgum diligentiorem
85 iudicem quam se praeferens; feruntque reprehensum a sutore, quod in crepidis una pauciores intus fecisset ansas, eodem postero die superbo emendatione pristinae admonitionis cavillante circa crus, indig-

[1] nobis *cdd.*: Rhodi *Mayhoff*: olim *Gronov.*
[2] *V.l.* spatiore (spatio sed B^2): spatio *Pintianus.*
[3] *V.l.* quam in: quam III *Gronov.*

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[a] Pliny surely indicates that Apelles drew a yet finer line on top of the other two down their length.
[b] Probably an outline of some object.
[c] *Nulla dies sine linea*, ‘No day without a line.’

visitor if he returned and add that this was the person he was in search of; and so it happened; for Apelles came back, and, ashamed to be beaten, cut [a] the lines with another in a third colour, leaving no room for any further display of minute work. Hereupon Protogenes admitted he was defeated, and flew down to the harbour to look for the visitor; and he decided that the panel should be handed on to posterity as it was, to be admired as a marvel by everybody, but particularly by artists. I am informed that it was burnt in the first fire which occurred in Caesar's palace on the Palatine; it had A.D. 4. been previously much admired by us, on its vast surface containing nothing else than the almost invisible lines, so that among the outstanding works of many artists it looked like a blank space, and by that very fact attracted attention and was more esteemed than any masterpiece.

Moreover it was a regular custom with Apelles never to let a day of business to be so fully occupied that he did not practise his art by drawing a line,[b] which has passed from him into a proverb.[c] Another habit of his was when he had finished his works to place them in a gallery in the view of passers by, and he himself stood out of sight behind the picture and listened to hear what faults were noticed, rating the public as a more observant critic than himself. And it is said that he was found fault with by a shoemaker because in drawing a subject's sandals he had represented the loops in them as one too few, and the next day the same critic was so proud of the artist's correcting the fault indicated by his previous objection that he found fault with the leg, but Apelles indignantly looked out from behind the

natum prospexisse denuntiantem, ne supra crepidam sutor iudicaret, quod et ipsum in proverbium abiit. fuit enim et comitas illi, propter quam gratior Alexandro Magno frequenter in officinam ventitanti—nam, ut diximus, ab alio se pingi vetuerat edicto—, sed in officina imperite multa disserenti silentium comiter suadebat, rideri eum dicens a
86 pueris, qui colores tererent. tantum erat auctoritati iuris in regem alioqui iracundum. quamquam Alexander honorem ei clarissimo perhibuit exemplo. namque cum dilectam sibi e pallacis suis praecipue, nomine Pancaspen,[1] nudam pingi ob admirationem formae ab Apelle iussisset eumque, dum paret, captum amore sensisset, dono dedit ei,[2] magnus animo, maior imperio sui nec minor hoc facto quam
87 victoria alia, quia [3] ipse se vicit, nec torum tantum suum, sed etiam adfectum donavit artifici, ne dilectae quidem respectu motus, cum modo regis ea fuisset, modo pictoris esset. sunt qui Venerem anadyomenen ab illo pictam exemplari putent. Apelles et in aemulis benignus Protogeni digna-

[1] pancaspen *B*: campaspen *aut* -em *rell.*: Pancasten *Sillig.*
[2] ei *Ian*: et.
[3] alia quia *M. Hertz*: alia *Urlichs*: alia qua *B*: aliqua *rell.*

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[a] *Ne sutor ultra crepidam.* "Let a shoemaker stick to his last."

picture and rebuked him, saying that a shoemaker in his criticism must not go beyond the sandal—a remark that has also passed into a proverb.[a] In fact he also possessed great courtesy of manners, which made him more agreeable to Alexander the Great, who frequently visited his studio—for, as we have said, Alexander had published an edict forbidding any other artist to paint his portrait; but in the studio Alexander used to talk a great deal about painting without any real knowledge of it, and Apelles would politely advise him to drop the subject, saying that the boys engaged in grinding the colours were laughing at him: so much power did his authority exercise over a King who was otherwise of an irascible temper. And yet Alexander conferred honour on him in a most conspicuous instance; he had such an admiration for the beauty of his favourite mistress, named Pancaspe, that he gave orders that she should be painted in the nude by Apelles, and then discovering that the artist while executing the commission had fallen in love with the woman, he presented her to him, great-minded as he was and still greater owing to his control of himself, and of a greatness proved by this action as much as by any other victory: because he conquered himself, and presented not only his bedmate but his affection also to the artist, and was not even influenced by regard for the feelings of his favourite in having been recently the mistress of a monarch and now belonged to a painter. Some persons believe that she was the model from which the Aphrodite Anadyomene (Rising from the Sea) was painted. It was Apelles also who, kindly among his rivals, first established the reputation of

Apelles and Alexander.

VII, 125.

88 tionem primus Rhodi constituit. sordebat suis, ut plerumque domestica, percontantique, quanti liceret opera effecta, parvum nescio quid dixerat, at ille quinquagenis talentis poposcit famamque dispersit, se emere, ut pro suis venderet. ea res concitavit Rhodios ad intellegendum artificem, nec nisi augentibus pretium cessit.

Imagines[1] adeo similitudinis indiscretae pinxit, ut—incredibile dictu—Apio grammaticus scriptum reliquerit, quendam ex facie hominum divinantem, quos metoposcopos vocant, ex iis dixisse aut futurae
89 mortis annos aut praeteritae vitae.[2] non fuerat ei gratia in comitatu Alexandri cum Ptolemaeo, quo regnante Alexandriam vi tempestatis expulsus, subornato fraude aemulorum plano regio invitatus, ad cenam venit indignantique Ptolemaeo et vocatores suos ostendenti, ut diceret, a quo eorum invitatus esset, arrepto carbone extincto e foculo imaginem in pariete delineavit, adgnoscente voltum plani rege
90 inchoatum protinus. pinxit et Antigoni regis imaginem altero lumine orbati[3] primus excogitata ratione vitia condendi; obliquam namque fecit, ut,

[1] imagines *Gelen*: imaginem.
[2] vitae *add. Brunn.*
[3] orbati *Mayhoff*: orbatam.

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[a] The word μετωποσκόπος means one who gazes at (examines) foreheads.

[b] Ptolemy I, who died in 286 B.C.

[c] 382–301 B.C. One of Alexander's generals, and King of Macedonia 306–301.

Protogenes at Rhodes. Protogenes was held in low esteem by his fellow-countrymen, as is usual with home products, and, when Apelles asked him what price he set on some works he had finished, he had mentioned some small sum, but Apelles made him an offer of fifty talents for them, and spread it about that he was buying them with the intention of selling them as works of his own. This device aroused the people of Rhodes to appreciate the artist, and Apelles only parted with the pictures to them at an enhanced price.

He also painted portraits so absolutely lifelike that, incredible as it sounds, the grammarian Apio has left it on record that one of those persons called 'physiognomists,'[a] who prophesy people's future by their countenance, pronounced from their portraits either the year of the subjects' deaths hereafter or the number of years they had already lived. Apelles had been on bad terms with Ptolemy in Alexander's retinue. When this Ptolemy[b] was King of Egypt, Apelles on a voyage had been driven by a violent storm into Alexandria. His rivals maliciously suborned the King's jester to convey to him an invitation to dinner, to which he came. Ptolemy was very indignant, and paraded his hospitality-stewards for Apelles to say which of them had given him the invitation. Apelles picked up a piece of extinguished charcoal from the hearth and drew a likeness on the wall, the King recognizing the features of the jester as soon as he began the sketch. He also painted a portrait of King Antigonus[c] who was blind in one eye, and devised an original method of concealing the defect, for he did the likeness in 'three-quarter,' so that the feature that was lacking in the

Apelles and Ptolemy I.

Apelles and Antigonus.

quod deerat corpori, picturae deesse[1] potius videretur, tantumque eam partem e facie ostendit, quam totam poterat ostendere. sunt inter opera eius et exspirantium imagines. quae autem nobilissima
91 sint, non est facile dictu. Venerem exeuntem e mari divus Augustus dicavit in delubro patris Caesaris, quae anadyomene vocatur, versibus Graecis tali opere,[2] dum[3] laudatur, victo[4] sed[5] inlustrato.[6] cuius inferiorem partem corruptam qui reficeret non potuit reperiri, verum ipsa iniuria cessit in gloriam artificis. consenuit haec tabula carie, aliamque pro ea substituit Nero in principatu suo
92 Dorothei manu. Apelles inchoaverat et aliam Venerem Coi,[7] superaturus etiam[8] illam suam priorem. invidit mors peracta parte, nec qui succederet operi ad praescripta liniamenta inventus est. pinxit et Alexandrum Magnum fulmen tenentem in templo Ephesiae Dianae viginti talentis auri. digiti eminere videntur et fulmen extra tabulam esse—legentes meminerint omnia ea quattuor coloribus facta; manipretium eius tabulae in nummo[9] aureo[10] mensura[11] accepit, non numero.

[1] adesse *coni. Mayhoff.*

[2] tantopere *Fröhner.*

[3] aevo dum *J. Müller.*

[4] victa *edd. vett.*: invicto *Schneidewin*: vitio *Fröhner*: ⟨aevis victa⟩ *Mayhoff.*

[5] est *Fröhner.*

[6] illustrata *edd. vett.*: versibus Graecis dum laudatur, tali opere ⟨aevis⟩ victo, sed inlustrato *coni. Mayhoff.*

[7] *V.l.* Cois.

[8] *V.l.* famam: fama *Urlichs.*

[9] in numero *cd. Par.* 6801: immane *cd. Flor. Ricc.*

[10] auro *olim Gelen* (*del.* nummo): aureos *edd. vett.*

[11] *V.l.* mensuram.

subject might be thought instead to be absent in the picture, and he only showed the part of the face which he was able to display as unmutilated. Among his works there are also pictures of persons at the point of death. But it is not easy to say which of his productions are of the highest rank. His Aphrodite emerging from the Sea was dedicated by his late lamented Majesty Augustus in the Shrine of his father Caesar; it is known as the Anadyomene; this like other works is eclipsed [a] yet made famous by the Greek verses which sing its praises; the lower part of the picture having become damaged nobody could be found to restore it, but the actual injury contributed to the glory of the artist. This picture however suffered from age and rot, and Nero when emperor substituted another for it, a work by Dorotheus. Apelles had also begun on another Aphrodite at Cos, which was to surpass even his famous earlier one; but death grudged him the work when only partly finished, nor could anybody be found to carry on the task, in conformity with the outlines of the sketches prepared. He also painted Alexander the Great holding a Thunderbolt, in the temple of Artemis at Ephesus, for a fee of twenty talents in gold. The fingers have the appearance of projecting from the surface and the thunderbolt seems to stand out from the picture—readers must remember [b] that all these effects were produced by four colours; the artist received the price of this picture in gold coin measured by weight,[c] not

Various Works by Apelles.

[a] 'Overcome' or 'surpassed' by the poet, who can express more than the painter can; for the painter can represent one moment only. [b] See § 50.

[c] It is suggested that this means that the price was the equivalent (in gold coins) of the weight of the panel.

93 pinxit et megabyzi, sacerdotis Dianae Ephesiae. pompam, Clitum cum equo ad bellum festinantem, galeam poscenti armigerum porrigentem.[1] Alexandrum et Philippum quotiens pinxerit, enumerare supervacuum est. mirantur eius Habronem Sami; Menandrum, regem Cariae, Rhodi, item Antaeum; Alexandreae Gorgosthenen tragoedum; Romae Castorem et Pollucem cum Victoria et Alexandro Magno, item Belli imaginem restrictis ad terga
94 manibus, Alexandro in curru triumphante. quas utrasque tabulas divus Augustus in fori sui celeberrimis partibus dicaverat simplicitate moderata; divus Claudius pluris existimavit utrisque excisa Alexandri facie divi Augusti imagines addere. eiusdem arbitrantur manu[2] esse et in Dianae[3] templo Herculem aversum, ut, quod est difficillimum, faciem eius ostendat verius pictura quam promittat. pinxit et heroa nudum eaque pictura naturam ipsam
95 provocavit. est et equus eius, sive fuit, pictus in certamine, quo iudicium ad mutas quadripedes provocavit ab hominibus. namque ambitu praevalere aemulos sentiens singulorum picturas inductis equis ostendit: Apellis tantum equo adhinnivere. idque et postea semper evenit, ut experimentum
96 artis illud ostentaretur. fecit et Neoptolemum ex[4]

[1] armigero porrigente *coni. Mayhoff.*
[2] manum *B.*
[3] Dianae *Preller*: annae *B*: antoniae *rell.*
[4] ⟨pugnantem⟩ ex *coni. Mayhoff*: *lac. post* Persas *Urlichs.*

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[a] Cf. § 27 and Serv. ad *Aen.* I, 294.
[b] *I.e.* he did not appropriate them for himself.

counted. He also painted a Procession of the Magabyzus, the priest of Artemis of Ephesus, a Clitus with Horse hastening into battle; and an armour-bearer handing someone a helmet at his command. How many times he painted Alexander and Philip it would be superfluous to recount. His Habron at Samos is much admired, as is his Menander, King of Caria, at Rhodes, likewise his Antaeus, and at Alexandria his Gorgosthenes the Tragic Actor, and at Rome his Castor and Pollux with Victory and Alexander the Great, and also his figure of War[a] with the Hands Tied behind, with Alexander riding in Triumph in his Chariot. Both of these pictures his late lamented Majesty Augustus with restrained good taste[b] had dedicated in the most frequented parts of his forum; the emperor Claudius however thought it more advisable to cut out the face of Alexander from both works and substitute portraits of Augustus. The Heracles with Face Averted in the temple of Diana is also believed to be by his hand—so drawn that the picture more truly displays Heracles' face than merely suggests it to the imagination—a very difficult achievement. He also painted a Nude Hero, a picture with which he challenged Nature herself. There is, or was, a picture of a Horse by him, painted in a competition, by which he carried his appeal for judgement from mankind to the dumb quadrupeds; for perceiving that his rivals were getting the better of him by intrigue, he had some horses brought and showed them their pictures one by one; and the horses only began to neigh when they saw the horse painted by Apelles; and this always happened subsequently, showing it to be a sound test of artistic skill. He

equo adversus Persas, Archelaum cum uxore et filia, Antigonum thoracatum cum equo incedentem. peritiores artis praeferunt omnibus eius operibus eundem regem sedentem in equo et Dianam sacrificantium virginum choro mixtam, quibus vicisse Homeri versus videtur id ipsum describentis. pinxit et quae pingi non possunt, tonitrua, fulgetra fulguraque; Bronten, Astrapen et Ceraunobolian appellant.

97 Inventa eius et ceteris profuere in arte; unum imitari nemo potuit, quod absoluta opera atramento inlinebat ita tenui, ut id ipsum, cum [1] repercussum [2] claritates [3] colorum [4] omnium [5] excitaret custodiretque a pulvere et sordibus, ad manum intuenti [6] demum appareret, sed et luminum [7] ratione magna, ne claritas colorum aciem offenderet veluti per lapidem specularem intuentibus et e longinquo eadem res nimis floridis coloribus austeritatem occulte daret.

98 Aequalis eius fuit Aristides Thebanus. is omnium primus animum pinxit et sensus hominis expressit,

[1] cum *add. Mayhoff.*

[2] repereussum B^1: repercussu *rell.*

[3] claritatis *B, cd. Par.* 6801: claritates *rell.*

[4] colorem *B*: colorum *rell.*: oculorum *edd. vett.*

[5] ōnium (= omnium) *Mayhoff*: aluum B^1: alium B^2: *om. rell.*: album *Traube.*

[6] intuenti et *B.*

[7] et luminum *Mayhoff*: etium B^1: etiam B^2: et cum *rell.*: et tum *Hermolaus Barbarus.*

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[a] One of Alexander's generals.

[b] Two soldiers with this name are recorded as serving under Alexander.

[c] The One-eyed. See § 90 and note.

also did a Neoptolemus [a] on Horseback fighting against the Persians, an Archelaus [b] with his Wife and Daughter, and an Antigonus [c] with a Breastplate marching with his horse at his side. Connoisseurs put at the head of all his works the portrait of the same king seated on horseback, and his Artemis in the midst of a band of Maidens offering a Sacrifice, a work by which he may be thought to have surpassed Homer's verses [d] describing the same subject. He even painted things that cannot be represented in pictures—thunder, lightning and thunderbolts, the pictures known respectively under the Greek titles of Bronte, Astrape and Ceraunobolia.

His inventions in the art of painting have been useful to all other painters as well, but there was one which nobody was able to imitate: when his works were finished he used to cover them over with a black varnish of such thinness that its very presence, while its reflexion threw up the brilliance of all the colours and preserved them from dust and dirt, was only visible to anyone who looked at it close up, but also employing great calculation of lights, so that the brilliance of the colours should not offend the sight when people looked at them as if through muscovy-glass and so that the same device from a distance might invisibly give sombreness to colours that were too brilliant.

Contemporary with Apelles was Aristides [e] of Thebes. He was the first of all painters who depicted the mind and expressed the feelings of a human *Aristides.*

[d] *Odyssey* VI, 102 ff., which describe Artemis and maidens wildly ranging amongst boars and deer, not sacrificing. The mistake arises from the two verbs θύω.

[e] The younger, grandson of Aristides, cf. § 75 and note on pp. 410 and 411.

quae vocant Graeci ἤθη, item perturbationes, durior paulo in coloribus. huius opera[1] . . . oppido capto ad matris morientis ex volnere mammam adrepens infans, intellegiturque sentire mater et timere, ne emortuo lacte[2] sanguinem lambat. quam tabulam Alexander Magnus transtulerat Pellam in
99 patriam suam. idem pinxit proelium cum Persis, centum homines tabula ea conplexus pactusque in singulos mnas denas a tyranno Elatensium Mnasone. pinxit et currentes quadrigas et supplicantem paene cum voce et venatores cum captura et Leontion Epicuri et anapauomenen propter fratris amorem,[3] item Liberum et Ariadnen[4] spectatos Romae in aede Cereris tragoedum et puerum in Apollinis,
100 cuius tabulae gratia interiit pictoris inscitia, cui tergendam eam mandaverat M. Iunius praetor sub die ludorum Apollinarium. spectata est et in aede Fidei in Capitolio senis cum lyra puerum docentis. pinxit et aegrum sine fine laudatum tantumque arte valuit, ut Attalus rex unam tabulam eius centum talentis emisse tradatur.

101 Simul, ut dictum est, et Protogenes floruit. patria ei Caunus, gentis Rhodiis subiectae. summa paupertas initio artisque summa intentio et ideo

[1] opera *B*: pictura *rell.*: *lac. Mayhoff.*
[2] lacte *B*[2]: flacte *B*[1]: facta *rell.*: e lacte *Mayhoff*: emortuae (*aut* emortua) pro lacte *coni. Warmington.*
[3] propter fratris amorem *supra post* voce *transp. Urlichs, infra post* Ariadnen *Dilthey.*
[4] artamenen *B*: arianen *cd. Par. Lat.* 6797: Artomenen *Dilthey.*

[a] There appears to be something lost here.
[b] After he had sacked Thebes in 335 B.C.
[c] It would be one of Alexander's great battles with Darius.
[d] Byblis perhaps, who died of love for her brother Caunus.

being, what the Greeks term *ēthē*, and also the emotions; he was a little too hard in his colours. His works include . . .[a] on the capture of a town, showing an infant creeping to the breast of its mother who is dying of a wound; it is felt that the mother is aware of the child and is afraid that as her milk is exhausted by death it may suck blood; this picture had been removed by Alexander the Great[b] to his native place, Pella. The same artist painted a Battle[c] with the Persians, a panel that contains a hundred human figures, which he parted with to Mnason the Tyrant of Elatea on the terms of ten minae per man. He also painted a Four-horse Chariots Racing, a Suppliant, who almost appeared to speak, Huntsmen with Quarry, Leontion Epicurus's mistress, and Woman[d] At Rest through Love of her Brother; and likewise the Dionysus and the Ariadne once on view in the Temple of Ceres at Rome, and the Tragic Actor and Boy in the Temple of Apollo, a picture of which the beauty has perished owing to the lack of skill of a painter commissioned by Marcus Junius as praetor to clean it in readiness for the festival of the Games of Apollo. There has also been on view in the Temple of Faith in the Capitol his picture of an Old Man with a Lyre giving lessons to a Boy. He also painted a Sick Man which has received unlimited praise; and he was so able an artist that King Attalus is said to have bought a single picture of his for a hundred talents.

Protogenes also flourished at the same time, as has *Protogenes.*
been said. He was born at Caunus, in a community § 81.
that was under the dominion of Rhodes. At the outset he was extremely poor, and extremely devoted to his art and consequently not very productive.

minor fertilitas. quis eum docuerit, non putant constare; quidam et naves pinxisse usque ad quinquagensimum annum; argumentum esse, quod cum Athenis celeberrimo loco Minervae delubri propylon pingeret, ubi fecit nobilem Paralum et Hammoniada, quam quidam Nausicaan vocant, adiecerit parvolas naves longas in iis, quae pictores parergia appellant, ut appareret, a quibus initiis ad arcem ostentationis [1]
102 opera sua pervenissent. palmam habet tabularum eius Ialysus, qui est Romae dicatus in templo Pacis. cum pingeret eum, traditur madidis lupinis vixisse, quoniam [2] sic [3] simul et famem sustineret [4] et sitim nec sensus nimia dulcedine obstrueret.[5] huic picturae quater colorem induxit ceu tria subsidia iniuriae et vetustatis, ut decedente [6] superiore inferior succederet. est in ea canis mire factus, ut quem pariter ars et casus [7] pinxerit. non iudicabat se in eo exprimere spumam anhelantis, cum in reliqua parte omni, quod difficillimum erat, sibi ipse satis-
103 fecisset. displicebat autem ars ipsa: nec minui poterat et videbatur nimia ac longius a veritate discedere, spumaque pingi, non ex ore nasci. anxio animi cruciatu, cum in pictura verum esse, non verisimile vellet, absterserat saepius mutaveratque

[1] artis ostentationem *Rochette.* [2] quo *Traube.*
[3] sic *add. Mayhoff.* [4] sustinerent *edd. vett.*
[5] obstrueret *B, cd. Par.* 6801: obstruerent *rell.*
[6] decidente *B recte?*
[7] ars et casus *Weil*: casus et ars *edd. vett.*: et casus *B*: casus *rell.*

[a] Patron-heroes of sacred Athenian triremes used in state-services. The Hammonias replaced the older ship Salaminia.
[b] Incidental details of any sort.
[c] With reference perhaps to the Acropolis or stronghold (*arx*) of Athens. [d] Mythical founder of Ialysus in Rhodes.

Who his teacher was is believed to be unrecorded. Some people say that until the age of fifty he was also a ship-painter, and that this is proved by the fact that when he was decorating with paintings, on a very famous site at Athens, the gateway of the Temple of Athene, where he depicted his famous Paralus and Hammonias,[a] which is by some people called the Nausicaa, he added some small drawings of battleships in what painters call the 'side-pieces,'[b] in order to show from what commencement his work had arrived at the pinnacle[c] of glorious display. Among his pictures the palm is held by his Ialysus,[d] which is consecrated in the Temple of Peace in Rome. It is said that while painting this he lived on soaked lupins, because he thus at the same time both sustained his hunger and thirst and avoided blunting his sensibilities by too luxurious a diet. For this picture he used four coats of paint, to serve as three protections against injury and old age, so that when the upper coat disappeared the one below it would take its place. In the picture there is a dog marvellously executed, so as to appear to have been painted by art and good fortune jointly: the artist's own opinion was that he did not fully show in it the foam of the panting dog, although in all the remaining details he had satisfied himself, which was very difficult. But the actual art displayed displeased him, nor was he able to diminish it, and he thought it was excessive and departed too far from reality—the foam appeared to be painted, not to be the natural product of the animal's mouth; vexed and tormented, as he wanted his picture to contain the truth and not merely a near-truth, he had several times rubbed off the paint and used another

penicillum, nullo modo sibi adprobans. postremo iratus arti, quod intellegeretur, spongeam inpegit inviso loco tabulae. et illa reposuit ablatos colores qualiter cura optaverat, fecitque in pictura fortuna naturam.

104 Hoc exemplo eius similis et Nealcen successus spumae equi similiter spongea inpacta secutus dicitur, cum [1] pingeret [2] poppyzonta retinentem eum.[3] ita Protogenes monstravit et fortunam.[4]

Propter hunc Ialysum, ne cremaret tabulam, Demetrius rex, cum ab ea parte sola posset Rhodum capere, non incendit, parcentemque picturae fugit

105 occasio victoriae. erat tunc Protogenes in suburbano suo hortulo, hoc est Demetrii castris,[5] neque interpellatus proeliis incohata opera intermisit omnino nisi accitus a rege, interrogatusque, qua fiducia extra muros ageret, respondit scire se cum Rhodiis illi bellum esse, non cum artibus. disposuit rex in tutelam eius stationes, gaudens quod manus servaret, quibus pepercerat, et, ne saepius avocaret, ultro ad eum venit hostis relictisque victoriae suae

[1] *V.l.* dicuntur cum (disceret *B*): dum celetem *Traube*.
[2] pingitur B^2: pingatur B^1: pingit ac *Traube*.
[3] *V.l.* retinent pane cum: *varia temptant edd.*
[4] ita . . . fortunam *transp. vult Warmington supra post* naturam § 103: *idem coni.* ita ⟨et iram.⟩.
[5] hoc . . . castris *delendum*? (*Urlichs*).

[a] See § 102, p. 337.

brush, quite unable to satisfy himself. Finally he fell into a rage with his art because it was perceptible, and dashed a sponge against the place in the picture that offended him, and the sponge restored the colours he had removed, in the way that his anxiety had wished them to appear, and chance produced the effect of nature in the picture!

It is said that Nealces also following this example of his achieved a similar success in representing a horse's foam by dashing a sponge on the picture in a similar manner, in a representation of a man clucking in his cheek to soothe a horse he was holding. Thus did Protogenes indicate the possibilities of a stroke of luck also.

Protogenes and King Demetrius. 305–4 B.C.

It was on account of this Ialysus [a] that King Demetrius, in order to avoid burning a picture, abstained from setting fire to Rhodes when the city could only be taken from the side where the picture was stored, and through consideration for the safety of a picture lost the chance of a victory! Protogenes at the time was in his little garden on the outskirts of the city, that is in the middle of the 'Camp of Demetrius,' and would not be interrupted by the battles going on, or on any account suspend the works he had begun, had he not been summoned by the King, who asked him what gave him the assurance to continue outside the walls. He replied that he knew the King was waging war with the Rhodians, not with the arts. The King, delighted to be able to safeguard the hands which he had spared, placed guardposts to protect him, and, to avoid repeatedly calling him from his work, actually though an enemy came to pay him visits, and quitting his aspirations for his own victory, in the thick of battles and the

votis inter arma et murorum ictus spectavit artificem; sequiturque tabulam illius temporis haec fama, quod eam Protogenes sub gladio pinxerit:
106 Satyrus hic est, quem anapauomenon vocant, ne quid desit temporis eius securitati, tenentem tibias.
Fecit et Cydippen et Tlepolemum, Philiscum tragoediarum scriptorem meditantem, et athletam[1] et Antigonum regem, matrem Aristotelis philosophi, qui ei suadebat, ut Alexandri Magni opera pingeret propter aeternitatem rerum; impetus animi et quaedam artis libido in haec potius eum tulere; novissime pinxit Alexandrum[2] ac Pana. fecit et signa ex aere, ut diximus.

107 Eadem aetate fuit Asclepiodorus, quem in symmetria mirabatur Apelles. huic Mnaso tyrannus pro duodecim diis dedit in singulos mnas tricenas, idemque Theomnesto in singulos heroas vicenas.

108 His adnumerari debet et Nicomachus, Aristidis[3] filius ac discipulus. pinxit raptum Proserpinae, quae tabula fuit in Capitolio in Minervae delubro supra aediculam Iuventatis, et in eodem Capitolio, quam Plancus imperator posuerat, Victoria quadrigam in sublime rapiens. Ulixi primus addidit pilleum.
109 pinxit et Apollinem ac Dianam, deumque matrem in leone sedentem, item nobiles Bacchas obrep-

[1] Alcetam *Gronov.*

[2] Alexandream *Fröhner.*

[3] Aristidis *Mayhoff coll.* 111, 122: Aristidi *Urlichs*: Aristidae illius *Oemichen*: Aristiaei *Sillig*: aristiaci *B*: ariste(-i-)cheimi *rell.*

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[a] Phaestis or Phaestias.

[b] The elder; cf. § 75 and note on pp. 410 and 411.

[c] Before the fire of A.D. 64.

[d] Munatius, who triumphed in 43 B.C.

[e] Cybele.

battering down of walls, looked on at the work of an artist. And even to this day the story is attached to a picture of that date that Protogenes painted it with a sword hanging over him. The picture is the one of a Satyr, called the Satyr Reposing, and to give a final touch to the sense of security felt at the time, the figure holds a pair of flutes.

Other works of Protogenes.

Other works of Protogenes were a Cydippe, a Tlepolemus, a Philiscus the Tragic Poet in Meditation, an Athlete, a portrait of King Antigonus, and one of the Mother [a] of Aristotle the philosopher. Aristotle used to advise the artist to paint the achievements of Alexander the Great, as belonging to history for all time. The impulse of his mind however and a certain artistic capriciousness led him rather to the subjects mentioned. His latest works were pictures of Alexander and of Pan. He also made bronze statues, as we have said. XXXIV, 91

Asclepeiodorus.

In the same period there was also Asclepiodorus, who was admired by Apelles for his proportions. For a picture of the Twelve Gods the tyrant Mnaso paid him three hundred minae per god. The same patron paid Theomnestus twenty minae for each of the heroes in a picture.

Nicomachus and others.

To the list of these artists must also be added Nicomachus son and pupil of Aristides.[b] He painted a Rape of Persephone, a picture formerly [c] in the Shrine of Minerva on the Capitol, just above the Chapel of Youth; and there was also in the Capitol, where it was placed by General Plancus,[d] his Victory hurrying her Chariot aloft. He was the first painter who represented Odysseus wearing a felt skull-cap. He also painted an Apollo and Artemis, and the Mother [e] of the Gods seated on a Lion, and likewise

tantibus Satyris, Scyllamque, quae nunc est Romae in templo Pacis. nec fuit alius in ea arte velocior. tradunt namque conduxisse pingendum ab Aristrato, Sicyoniorum tyranno, quod is faciebat Telesti poetae monimentum praefinito die, intra quem perageretur, nec multo ante venisse, tyranno in poenam accenso, paucisque diebus absolvisse et celeritate et arte

110 mira. Discipulos habuit Aristonem fratrem et Aristiden[1] filium et Philoxenum Eretrium, cuius tabula nullis postferenda, Cassandro regi picta, continuit Alexandri proelium cum Dario. idem pinxit et lasciviam, in qua tres Sileni comissantur. hic celeritatem praeceptoris secutus breviores etiamnum quasdam picturae conpendiarias invenit.

111 Adnumeratur his et Nicophanes, elegans ac concinnus ita, ut venustate ei pauci conparentur; cothurnus et gravitas artis multum a Zeuxide et Apelle abest. Apellis discipulus Perseus, ad quem de hac arte scripsit, huius fuerat aetatis. Aristidis Thebani discipuli fuerunt et filii Niceros et Ariston, cuius est Satyrus cum scypho coronatus, discipuli Antorides[2] et Euphranor, de quo mox dicemus.

112 XXXVII. Namque subtexi par est minoris picturae celebres in penicillo, e quibus fuit Piraeicus[3]

[1] *V.l.* Aristoclem.
[2] Antenorides *Letronne*.
[3] Piraeicus *Ian*: pirasicus *B*: praeicus *aut* preicus *rell.* (peritus *cd. Par.* 6801).

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[a] The younger. Cf. §98 and note on pp. 410–411.
[b] King of Macedonia 306–297 B.C.
[c] The younger confused with the elder, §§ 75, 98, 108.
[d] Really pupils of the elder Aristides.
[e] Really pupils of the elder Aristides.

a fine picture of Bacchants with Satyrs prowling towards them, and a Scylla that is now in the Temple of Peace in Rome. No other painter was ever a more rapid worker. Indeed it is recorded that he accepted *c.* 355 B.C. a commission from the tyrant of Sicyon Aristratus to paint by a given date a monument that he was erecting to the poet Telestes, and that he only *fl. c.* 398 B.C. arrived not long before the date; the wrathful tyrant threatened to punish him, but in a few days he finished the work with a speed and an artistic skill that were both remarkable. Among his pupils were his brother Ariston and his son Aristides,[a] and Philoxenus of Eretria, who painted for King Cassander [b] a picture that holds the highest rank, containing a battle between Alexander and Darius. He also painted a picture with a wanton subject showing three Sileni at their revels. Imitating the rapidity of his master he introduced some shorthand methods of painting, executed with still more rapidity of technique.

With these artists is also reckoned Nicophanes, an elegant and finished painter with whom few can be compared for gracefulness, but who for tragic feeling and weight of style is far from Zeuxis and Apelles. Perseus, the pupil to whom Apelles dedicated his § 79. volumes on the art of painting, had belonged to the same period. Aristides [c] of Thebes also had as his pupils his sons Niceros and Ariston,[d] the latter the painter of a Satyr Crowned with a Wreath and Holding a Goblet; and other pupils of Aristides were Antorides and Euphranor [e]; about the latter we shall speak later on. § 128.

XXXVII. For it is proper to append the artists *Piraeicus and others.* famous with the brush in a minor style of painting.

arte paucis postferendus: proposito nescio an distinxerit[1] se, quoniam humilia quidem secutus humilitatis tamen summam adeptus est gloriam. tonstrinas sutrinasque pinxit et asellos et obsonia ac similia, ob haec cognominatus rhyparographos, in iis consummatae voluptatis, quippe eae pluris
113 veniere quam maximae multorum. e diverso Maeniana, inquit Varro, omnia operiebat Serapionis tabula sub Veteribus. hic scaenas optime pinxit, sed hominem pingere non potuit. contra Dionysius nihil aliud quam homines pinxit, ob id anthropo-
114 graphos cognominatus. parva et Callicles fecit, item Calates comicis tabellis, utraque Antiphilus. namque et Hesionam nobilem pinxit et Alexandrum ac Philippum cum Minerva, qui sunt in schola in Octaviae porticibus, et in Philippi Liberum patrem, Alexandrum puerum, Hippolytum tauro emisso expavescentem, in Pompeia vero Cadmum et Europen. idem iocoso[2] nomine Gryllum deridiculi habitus pinxit, unde id genus picturae grylli vocantur. ipse in Aegypto natus didicit a Ctesidemo.

[1] distinxerit *Mayhoff*: distrinxerit *Fröhner*: distruxerit *aut* destruxerit. [2] iocoso *edd. vett.*: iocosis *aut* locosis.

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[a] Balconies on houses in Rome first built by one Maenius.
[b] Large and small pictures.

Among these was Piraeicus, to be ranked below few painters in skill; it is possible that he won distinction by his choice of subjects, inasmuch as although adopting a humble line he attained in that field the height of glory. He painted barbers' shops and cobblers' stalls, asses, viands and the like, consequently receiving a Greek name meaning 'painter of sordid subjects'; in these however he gives exquisite pleasure, and indeed they fetched bigger prices than the largest works of many masters. On the other hand 'a picture by Serapio,' says Varro, 'covered the whole of the Maenian Balconies [a] at the place Beneath the Old Shops.' Serapio was a most successful scene-painter, but he could not paint a human being. On the contrary, Dionysius painted nothing else but people, and consequently has a Greek name meaning 'Painter of Human Beings.' Callicles also made small pictures, and so did Calates of subjects taken from comedy; both classes [b] were painted by Antiphilus, who executed *Antiphilus.* the famous picture of Hesione and an Alexander and a Philip [c] with Athene which are now in the school in Octavia's Porticoes, and in Philippus' [d] Portico a Father Liber or Dionysus, a Young Alexander, a Hippolytus alarmed by the Bull rushing upon him, and in Pompey's Portico a Cadmus and Europa. He also painted a figure in an absurd costume known by the joking name of Gryllus, the name consequently applied to every picture of that sort. He was himself born in Egypt and a pupil of Ctesidemus.

[c] King of Macedon, father of Alexander.

[d] Of L. Marcius Philippus; built in 29 B.C.; Octavia's were built after 27 B.C., Pompey's (see below) in 55 B.C.

115 Decet non sileri et Ardeatis templi pictorem, praesertim civitate donatum ibi et carmine,[1] quod est in ipsa pictura his versibus:

Dignis dignu'[2] loco[3] picturis condecoravit
reginae Iunonis supremi coniugis templum
Plautius Marcus[4]; cluet Asia lata[5] esse oriundus,
quem nunc et post semper ob artem hanc Ardea laudat,

116 eaque sunt scripta antiquis litteris Latinis; non fraudando[6] et S. Tadio[7] divi Augusti aetate, qui primus instituit amoenissimam parietum picturam, villas et porticus[8] ac topiaria opera, lucos, nemora, colles, piscinas, euripos, amnes, litora, qualia quis optaret, varias ibi obambulantium species aut navigantium terraque villas adeuntium asellis aut vehiculis, iam piscantes, aucupantes aut venantes
117 aut etiam vindemiantes. sunt in eius exemplaribus nobiles palustri[9] accessu[10] villae, succollatis[11] sponsione[12] mulieribus labantes trepidis quae[13] feruntur, plurimae praeterea tales argutiae facetissimi salis.

[1] carmen *Schneidewin.*

[2] dignu' *Hermolaus Barbarus*: digna.

[3] *fortasse* Lyco: *fortasse* dignu' loco dignis picturis *vel* dignis digna loco. picturis.

[4] plaucius marcus *B*: marcus plautis marcus *rell.*

[5] cluet Asia lata *Bergk*: Cleoetas Alalia *Sillig*: cluetas alata *B*: cloet (do et *cd. Flor. Ricc.*) asia lata *rell.*

[6] fraudanda *Mayhoff.*

[7] S. Tadio *Urlichs, Ian*: studio *B*: ludio *rell.*

[8] porticus *cd. Par. Lat.* 6797, *ut videtur*: portus *rell.*

[9] palustri *B*: paulstri *rell.*: plaustri *edd. vett.*

[10] accessu *B*: ac censu *rell.*

[11] succollatis *cdd.* (suae collatis *B*): subcollantium *Hermolaus Barbarus.*

[12] specie *Hermolaus Barbarus.*

[13] trepidis quae *B, cd. Leid. Voss.*: trepidisque *rell.*

It is proper also not to pass over the painter of the temple at Ardea, especially as he was granted the citizenship of that place and honoured with an inscription on the picture, consisting in the following verses: *Italian painters. Plautius*

One Marcus Plautius, a worthy man,
Adorned, with paintings worthy of this place,[a]
The shrine of Juno, Queen of Spouse supreme,
This Marcus Plautius, as men know, was born
In Asia wide. Now, and hereafter always,
Ardea applauds him for this work of art.

These lines are written in the antique Latin script. Nor must Spurius Tadius [b] also, of the period of his late lamented Majesty Augustus, be cheated of his due, who first introduced the most attractive fashion of painting walls with pictures of country houses and porticoes and landscape gardens, groves, woods, hills, fish-ponds, canals, rivers, coasts, and whatever anybody could desire, together with various sketches of people going for a stroll or sailing in a boat or on land going to country houses riding on asses or in carriages, and also people fishing and fowling or hunting or even gathering the vintage. His works include splendid villas approached by roads across marshes,[c] men tottering and staggering along carrying women on their shoulders for a bargain, and a number of humorous drawings of that sort besides, extremely wittily designed. He *Tadius* *Before A.D. 37.*

[a] But perhaps the right reading is *Dignis digna. Lyco...* 'To the worthy, worthy reward; Lycon adorned. . . .' *I.e.* the artist was M. Plautius Lycon, keeping his Greek name when he received a new one on becoming a citizen at Ardea.

[b] Or Studius or Ludius. The reading is uncertain.

[c] Or: 'well known among his works are men approaching a country house across marshes. . . .' The Latin text of much of this sentence is uncertain.

idem subdialibus maritimas urbes pingere instituit, blandissimo aspectu minimoque inpendio.

118 Sed nulla gloria artificum est nisi qui tabulas pinxere. eo venerabilior antiquitatis prudentia apparet. non enim parietes excolebant dominis tantum nec domos uno in loco mansuras, quae ex incendiis rapi non possent. casa Protogenes contentus erat in hortulo suo; nulla in Apellis tectoriis pictura erat. nondum libebat parietes totos tinguere; omnium eorum ars urbibus excubabat, pictorque res communis terrarum erat.

119 Fuit et Arellius Romae celeber paulo ante divum Augustum, ni flagitio insigni corrupisset artem, semper ei lenocinans feminae, cuius[1] amore flagraret, et[2] ob id deas pingens, sed dilectarum imagine.

120 itaque in pictura eius scorta numerabantur. fuit et nuper gravis ac severus idemque floridis tumidus[3] pictor Famulus.[4] huius erat Minerva spectantem spectans, quacumque aspiceretur. paucis diei horis pingebat, id quoque cum gravitate, quod semper togatus, quamquam in machinis. carcer eius artis domus aurea fuit, et ideo non extant exempla alia magnopere. post eum fuere in auctoritate Cornelius Pinus et Attius Priscus, qui Honoris

[1] feminae cuius *Mayhoff*: cuius feminae.

[2] flagraret et *Urlichs*: flagrans esset *coni. Sillig*: flagrans et.

[3] floridis tumidus *coni. Ian*: floridis (floridus B^2) umidus *B*: floridus humilis *cd. Par. Lat.* 6797: f. h. rei *cd. Par.* 6801: f. humidis *cd. Flor. Ricc.*: f. umidis *rell.*: floridus et vividus *Traube*: floridus *Sillig*: floridissimus *Urlichs*: floridis multus *vel* f. nitidus *vel* invictus *coni. Mayhoff*: S. Ummidius *Fröhner*.

[4] Famulus *cdd.*: famulus *Fröhner*: Fabullus *ed. princ.*

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[a] *I.e.* canvases or panels, not wall-paintings. [b] Nero's palace.

also introduced using pictures of seaside cities to decorate uncovered terraces, giving a most pleasing effect and at a very small expense.

But among artists great fame has been confined to painters of pictures only,[a] a fact which shows the wisdom of early times to be the more worthy of respect, for they did not decorate walls, merely for owners of property, or houses, which would remain in one place and which could not be rescued from a fire. Protogenes was content with a cottage in his little garden; Apelles had no wall-frescoes in his house; it was not yet the fashion to colour the whole of the walls. With all these artists their art was on the alert for the benefit of cities, and a painter was the common property of the world.

A little before the period of his late lamented *Arellius* Majesty Augustus, Arellius also was in high esteem at Rome, had he not prostituted his art by a notorious outrage, by always paying court to any woman he happened to fall in love with, and consequently painting goddesses, but in the likeness of his mistresses; and so his pictures included a number of portraits of harlots. Another recent painter was *Famulus* Famulus, a dignified and severe but also very florid artist; to him belonged a Minerva who faced the spectator at whatever angle she was looked at. Famulus used to spend only a few hours a day in painting, and also took his work very seriously, as he always wore a toga, even when in the midst of his easels. The Golden House[b] was the prison that contained his productions, and this is why other examples of his work are not extant to any considerable extent. After him in esteem were Cornelius Pinus and Attius Priscus, who painted

Virtutis aedes Imperatori Vespasiano Augusto restituenti pinxerunt, Priscus antiquis similior.

121 XXXVIII. Non est omittenda in picturae mentione celebris circa Lepidum fabula, siquidem in triumviratu quodam loco deductus a magistratibus in nemorosum hospitium minaciter cum iis postero die expostulavit somnum ademptum sibi volucrum concentu; at illi draconem in longissima membrana depictum circumdedere luco, eoque terrore aves tunc siluisse narratur et postea posse compesci.

122 XXXIX. Ceris pingere ac picturam inurere quis primus excogitaverit, non constat. quidam Aristidis inventum putant, postea consummatum a Praxitele; sed aliquanto vetustiores encaustae picturae exstitere, ut Polygnoti et Nicanoris, Mnesilai[1] Pariorum. Elasippus[2] quoque Aeginae picturae suae inscripsit ἐνέκαεν, quod profecto non fecisset nisi encaustica inventa.

123 XL. Pamphilus quoque, Apellis praeceptor, non pinxisse solum encausta, sed etiam docuisse traditur Pausian Sicyonium, primum in hoc genere nobilem. Bryetis filius hic fuit eiusdemque primo discipulus. pinxit et ipse penicillo parietes Thespiis, cum reficerentur quondam a Polygnoto picti,

[1] Mnesilai *Mayhoff*: mens im *B*: ae *aut* e manesilai *rell.* ac Mnasilai *Detlefsen*: et Archesilai *Hermolaus Barbarus* (et arcesilai *cd. Par.* 6801 *ut videtur*).

[2] Elasippus *Schneidewin*: eiasippus *B*: lassippus *rell.*: Lysippus *edd. vett.*

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[a] With Octavian and Antony, formed in 43 B.C.

[b] Apparently the elder; cf. § 75.

the temples of Honour and Virtue for the Emperor Vespasian's restoration of them; Priscus was nearer in style to the artists of old days.

XXXVIII. In speaking of painting one must not omit the famous story about Lepidus. During his Triumvirate,[a] when entertained by the magistrates of a certain place, he was given lodging in a house buried in trees; and the next day he complained to them in threatening language that he had been robbed of sleep by the singing of the birds; however the authorities had a picture of a large snake made on an extremely long strip of parchment and fixed it up round the wood, and the story goes that this at once frightened the birds into silence, and that subsequently it was possible to keep them in check.

XXXIX. It is not agreed who was the inventor of painting in wax and of designs in encaustic. Some people think it was a discovery of Aristides,[b] subsequently brought to perfection by Praxiteles, but there were encaustic paintings in existence at a considerably earlier date, for instance those of Polygnotus, and Nicanor and Mnasilaus of Paros. Also Elasippus of Aegina has inscribed on a picture *enekaën* (' burnt in '), which he would not have done if the art of encaustic painting had not been invented. *Painting in wax; encaustic.*

XL. It is recorded also that Pamphilus, the teacher of Apelles, not only painted in encaustic but also taught it to Pausias of Sicyon, the first artist who became famous in this style. Pausias was the son of Bryetes, and started as his father's pupil. He himself also did some wall-painting with the brush at Thespiae, when some old paintings by Polygnotus were being restored, and he was deemed to come *Pausias.*

multumque comparatione superatus existimabatur,
124 quoniam non suo genere certasset. idem et lacunaria primus pingere instituit, nec camaras ante eum taliter adornari mos fuit; parvas pingebat tabellas maximeque pueros. hoc aemuli interpretabantur facere eum, quoniam tarda picturae ratio esset illi. quam ob rem daturus ei celeritatis famam absolvit uno die tabellam quae vocata est hemeresios, puero
125 picto. amavit in iuventa Glyceram municipem suam, inventricem coronarum, certandoque imitatione eius ad numerosissimam florum varietatem perduxit artem illam. postremo pinxit et[1] ipsam sedentem cum corona, quae e nobilissimis tabula est, appellata stephanoplocos, ab aliis stephanopolis, quoniam Glycera venditando coronas sustentaverat paupertatem. huius tabulae exemplar, quod apographon vocant, L. Lucullus duobus talentis emit. . . .[2]
126 Dionysius[3] Athenis. Pausias autem fecit et grandes tabulas, sicut spectatam in Pompei porticu boum immolationem. eam primus invenit picturam, quam postea imitati sunt multi, aequavit nemo. ante omnia, cum longitudinem bovis ostendi vellet, adversum eum pinxit, non traversum, et abunde

[1] et *B*: *om. rell.* [2] *lac. Mayhoff.*
[3] Dionysiis *Pintianus*: a Dionysio *edd. vett.*

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[a] There is no proof that perspective is meant, but somehow Pausias gave the figure due relief.

off very second best in comparison with the original artist, having entered into competition in what was not really his line. Pausias also first introduced the painting of panelled ceilings, and it was not customary before him to decorate arched roofs in this way. He used to paint miniatures, and especially children. His rivals explained this practice as being due to the slow pace of his work in painting; and consequently to give his work also the reputation of speed he finished a picture in a single day, a picture of a boy which was called in Greek Hemeresios, meaning One-day Boy. In his youth he fell in love with a fellow-townswoman named Glycera, who invented chaplets of flowers; and by imitating her in rivalry he advanced the art of encaustic painting so as to reproduce an extremely numerous variety of flowers. Finally he painted a portrait of the woman herself, seated and wearing a wreath, which is one of the very finest of pictures; it is called in Greek Stephanoplocos, Girl making Wreaths, or by others Stephanopōlis, Girl selling Wreaths, because Glycera had supported her poverty by that trade. A copy (in Greek *apographon*) of this picture was bought by Lucius Lucullus at Athens for two talents; ⟨it had been made by⟩ 88–7 B.C.
Dionysius at Athens. But Pausias also did large pictures, for instance the Sacrifice of Oxen which formerly was to be seen in Pompey's Portico. He first invented a method of painting which has afterwards been copied by many people but equalled by no one; the chief point was that although he wanted to show the long body of an ox he painted the animal facing the spectator and not standing sideways, and its great size is fully conveyed.[a]

127 intellegitur amplitudo. dein, cum omnes, quae volunt eminentia videri, candicanti faciant colore, quae condunt, nigro, hic totum bovem atri coloris fecit umbraeque corpus ex ipsa[1] dedit, magna prorsus arte in aequo extantia ostendente et in confracto solida omnia. Sicyone et hic vitam egit, diuque illa fuit patria picturae. tabulas inde e publico omnes propter aes alienum civitatis addictas Scauri aedilitas Romam transtulit.

128 Post eum eminuit longe ante omnes Euphranor Isthmius olympiade CIIII, idem qui inter fictores dictus est nobis. fecit et colossos et marmorea et typos[2] scalpsit, docilis ac laboriosus ante omnes et in quocumque genere excellens ac sibi aequalis. hic primus videtur expressisse dignitates heroum et usurpasse symmetrian, sed fuit in universitate corporum exilior et capitibus articulisque grandior.
129 volumina quoque composuit de symmetria et coloribus. opera eius sunt equestre proelium, XII dei, Theseus, in quod dixit eundem apud Parrhasium rosa pastum esse, suum vero carne. nobilis eius tabula Ephesi est, Ulixes simulata insania bovem cum equo iungens et palliati cogitantes, dux gladium condens.

[1] *V.l.* ipso. [2] scyphos *cd. Par.* 6801.

[a] Pliny perhaps means that in spite of varying ('broken') tones of black, all the black looks solid.

[b] *I.e.* later than P. But this is wrong. Pliny's mistake has been traced to his confusion of the two artists named Aristides. Cf. §§ 75, 108, 111 and note on pp. 410–11.

[c] Fingers and toes?

[d] Which preceded the battle of Mantinea, 362 B.C. This

Next, whereas all painters ordinarily execute in light colour the parts they wish to appear prominent and in dark those they wish to keep less obvious, this artist has made the whole ox of a black colour and has given substance to the shadow from the shadow itself, with quite remarkable skill that shows the shapes standing out on a level surface and a uniform solidity on a broken ground.[a] Pausias also passed his life at Sicyon, which was for a long period a native place of painting. But all the pictures there had to be sold to meet a debt of the community, and were removed from the ownership of the state to Rome by Scaurus as aedile. 56 B.C.

After Pausias,[b] Euphranor the Isthmian distinguished himself far before all others, in the 104th Olympiad; he has also appeared in our account of statuaries. His works included colossal statues, works in marble, and reliefs, as he was exceptionally studious and diligent, excelling in every field and never falling below his own level. This artist seems to have been the first fully to represent the lofty qualities of heroes, and to have achieved good proportions, but he was too slight in his structure of the whole body and too large in his heads and joints.[c] He also wrote books about proportions and about colours. Works of his are a Cavalry Battle,[d] the Twelve Gods, and a Theseus, in respect of which he said that Parrhasius's Theseus had lived on a diet of roses, but his was a beef-eater. There is a celebrated picture by him at Ephesus, Odysseus Feigning Madness and yoking an ox with a horse, with men in cloaks reflecting, and the leader sheathing his sword.

Euphranor. 364–361 B.C. XXXIV, 50.

and the next two pictures were both in the Stoa of Zeus Eleutherios at Athens. Paus. I, 3, 3–4.

130 Eodem tempore fuere Cydias,[1] cuius tabulam Argonautas HS $\overline{\text{CXXXXIIII}}$ Hortensius orator mercatus est eique aedem fecit in Tusculano suo. Euphranoris autem discipulus Antidotus. huius est clipeo dimicans Athenis et luctator tubicenque inter pauca laudatus. ipse diligentior quam numerosior et in coloribus severus [2] maxime inclaruit discipulo Nicia Atheniense, qui diligentissime mulieres pinxit.
131 lumen et umbras custodiit atque ut eminerent e tabulis picturae [3] maxime curavit. operum [4] eius Nemea advecta ex Asia Romam a Silano, quam in curia diximus positam, item Liber pater in aede Concordiae, Hyacinthus, quem Caesar Augustus delectatus eo secum deportavit Alexandrea capta, et ob id Tiberius Caesar in templo eius dicavit hanc tabulam, et Danae,[5] Ephesi vero est megabyzi,
132 sacerdotis Ephesiae Dianae, sepulchrum, Athenis necyomantea Homeri. hanc vendere Attalo regi noluit talentis LX potiusque patriae suae donavit abundans opibus. fecit et grandes picturas, in quibus sunt Calypso et Io et Andromeda; Alexander quoque in Pompei porticibus praecellens et Calypso sedens huic eidem [6] adscribuntur.

[1] Cydias *Detlefsen*: et Cydias Cythnius *Urlichs*, *Bergk*: cydi (*aut* cidi) et cydias (*aut* cidias).
[2] *V.ll.* severior.
[3] figurae *coni. Mayhoff.*
[4] operū (= operum) *Mayhoff*: opera.
[5] danae // *cd. Leid. Voss.*: *v.ll.* danaen, danen, diana.
[6] eidem *Sillig*, *Schultz*: quidem *edd. vett.*: fidem.

[a] In the forum at Rome; built by Tiberius, A.D. 14.
[b] 'Place of prophecy of the dead,' *Odyssey* Bk. XI.
[c] Attalus I of Pergamum, 241–197 B.C. But Plutarch is probably right in giving the king's name as Ptolemy I Soter, ruler of Egypt 323–284 B.C.

Contemporaries of Euphranor were Cydias, for *Cydias.*
whose picture of the Argonauts the orator Hortensius 114–50 B.C.
paid 144,000 sesterces, and made a shrine for its reception at his villa at Tusculum. Euphranor's pupil was Antidotus. Works by the latter are a *Antidotus*
Combatant with a Shield at Athens and a Wrestler and a Trumpeter which has been exceptionally praised. Antidotus himself was more careful in his work than prolific, and severe in his use of colours; his chief distinction was being the teacher of the Athenian Nicias, who was an extremely careful *Nicias the younger.*
painter of female portraits. Nicias kept a strict watch on light and shade, and took the greatest pains to make his paintings stand out from the panels. Works of his are: a Nemea, brought to Rome from 75 B.C.
Asia by Silanus and deposited in the Senate-house as we have said, and also the Father Liber or Dionysus § 27.
in the Shrine of Concord, a Hyacinthus with which Caesar Augustus was so delighted that when he took 30 B.C.
Alexandria he brought it back with him—and consequently Tiberius Caesar dedicated this picture in the Temple [a] of Augustus—and a Danaë; while at Ephesus there is the tomb of a megabyzus or priest of Diana of Ephesus, and at Athens there is a Necyomantea [b] of Homer. The last the artist refused to sell to King Attalus [c] for 60 talents, and preferred to present it to his native place, as he was a wealthy man. He also executed some large pictures, among them a Calypso, an Io [d] and an Andromeda; and also the very fine Alexander in Pompey's Porticoes and a Seated Calypso are assigned to him.

[d] One or two extant later paintings may be copies of this. A. Rumpf, *Journ. Hellen. St.*, LXVII, 21.

133 Quadripedum[1] prosperrime canes expressit. hic est Nicias, de quo dicebat Praxiteles interrogatus, quae maxime opera sua probaret in marmoribus: quibus Nicias manum admovisset; tantum circumlitioni eius tribuebat. non satis discernitur, alium eodem nomine an hunc eundem quidam faciant olympiade CXII.

134 Niciae comparatur et aliquando praefertur Athenion Maronites, Glaucionis Corinthii discipulus, austerior colore et in austeritate iucundior, ut in ipsa pictura eruditio eluceat. pinxit in templo Eleusine phylarchum et Athenis frequentiam, quam vocavere syngenicon, item Achillem virginis habitu occultatum Ulixe deprendente et in una tabula VI signa,[2] quaque maxime inclaruit, agasonem cum equo. quod nisi in iuventa obiiset, nemo compararetur.

135 Est nomen et Heraclidi Macedoni. initio naves pinxit captoque Perseo rege Athenas commigravit. ubi eodem tempore erat Metrodorus, pictor idemque philosophus, in utraque scientia magnae auctoritatis. itaque cum L. Paulus devicto Perseo petiisset ab Atheniensibus, ut ii sibi quam probatissimum philosophum mitterent ad erudiendos liberos, item pictorem ad triumphum excolendum, Athenienses Metrodorum elegerunt, professi eundem in utroque desiderio praestantissimum, quod ita Paulus quoque

[1] quadripedum *Madvig*: quadripedē (quadripedes *B*).
[2] VI signa *Gronov*: insigni *Duran*': ut signa.

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[a] It must be remembered that Greek marbles were painted.

In drawings of animals he was most successful with dogs. It is this Nicias of whom Praxiteles used to say, when asked which of his own works in marble he placed highest, 'The ones to which Nicias has set his hand'—so much value did he assign to his colouring of surfaces.[a] It is not quite clear whether it is another artist of the same name or this Nicias whom some people put in the 112th Olympiad. *Nicias the elder.* 332-329 B.C.

With Nicias is compared Athenion of Maronea, and sometimes to the disadvantage of the former. Athenion was a pupil of Glaucion of Corinth; he is more sombre in his colour than Nicias and yet therewithal more pleasing, so that his extensive knowledge shines out in his actual painting. He painted a Cavalry Captain in the temple at Eleusis and at Athens the group of figures which has been called the Family Group, and also an Achilles Disguised in Female Dress detected by Odysseus, a group of six figures in a single picture, and a Groom with a Horse, which has specially contributed to his fame. If he had not died in youth, there would have been nobody to compare with him. *Athenion.*

Heraclides of Macedon is also a painter of note. He began by painting ships, and after the capture of King Perseus he migrated to Athens, where at the same period was the painter Metrodorus, who was also a philosopher and a great authority in both fields. Accordingly when Lucius Paulus after conquering Perseus requested the Athenians to send him their most esteemed philosopher to educate his children, and also a painter to embellish his triumphal procession, the Athenians selected Metrodorus, stating that he was most distinguished in both of these requirements alike, as to which Paulus also *Heraclides.* 168 B.C. *Metrodorus*

136 iudicavit. Timomachus Byzantius Caesaris dictatoris aetate Aiacem et Mediam pinxit, ab eo in Veneris Genetricis aede positas, LXXX talentis venundatas. talentum Atticum X $\overline{\text{VI}}$ [1] taxat M. Varro. Timomachi aeque laudantur Orestes, Iphigenia in Tauris et Lecythion, agilitatis exercitator, cognatio nobilium, palliati, quos dicturos pinxit, alterum stantem, alterum sedentem. praecipue tamen ars ei favisse in Gorgone visa est.

137 Pausiae filius et discipulus Aristolaus e severissimis pictoribus fuit, cuius sunt Epaminondas, Pericles, Media, Virtus, Theseus, imago Atticae plebis, boum immolatio. sunt quibus et Nicophanes, eiusdem Pausiae discipulus, placeat diligentia, quam intellegant soli artifices, alias durus in coloribus et sile multus. nam Socrates iure omnibus placet; tales sunt eius cum Aesculapio filiae Hygia, Aegle,[2] Panacea, Iaso,[3] et piger, qui appellatur Ocnos, spartum torquens, quod asellus adrodit.

138 Hactenus indicatis proceribus in utroque genere non silebuntur et primis proximi: Aristoclides, qui [4] pinxit aedem Apollinis Delphis. Antiphilus puero ignem conflante laudatur ac pulchra alias domo [5]

[1] VI *Hardouin*: VI.M. *B*: XVI *rell.*

[2] Hygia, Aegle *edd. vett.*: thygiaegle *B*: hygiagle *rell.*

[3] Panacea, Iaso *Hermolaus Barbarus*: panaca iasus *B*: p. lacus *cd. Par. Lat.* 6797: penaca lacus *aut* locus *rell.*

[4] qui *delendum coni. Mayhoff.*

[5] laudatur e pictura atra foculo *coni. Mayhoff.*

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[a] Copies of this picture exist.

[b] Probably a mask of Medusa.

[c] Hence a Latin proverb: *ocnus spartum torquens*, 'sloth twisting a rope.' *I.e.* 'Labour in vain.'

[d] Both large and small pictures.

held the same view. Timomachus of Byzantium in the period of Caesar's dictatorship[a] painted an Ajax and a Medea, placed by Caesar in the temple of Venus Genetrix, having been bought at the price of 80 talents (Marcus Varro rates the Attic talent at 6000 denarii). Equal praise is given to Timomachus's Orestes, his Iphigenia among the Tauri and his Gymnastic-Master Lecythion; also his Noble Family and his Two Men wearing the Pallium, whom he has represented as about to converse; one is a standing figure and the other seated. It is in his painting of a Gorgon[b] however that his art seems to have given him most success. *Timomachus. 46 B.C.*

Pausias's son and pupil Aristolaus was one of the painters of the very severe style; to him belong an Epaminondas, a Pericles, a Medea, a Virtue, a Theseus, a figure representing the Athenian People, and a Sacrifice of Oxen. Some persons also admire Nicophanes, who was likewise a pupil of Pausias, for his careful accuracy which only artists can appreciate, though apart from that he is hard in his colouring and lavish in his use of ochre. As for Socrates he is justly a universal favourite; popular pictures by him are his group of Asclepius with his daughters Health, Brightness, All-Heal and Remedy, and his Sluggard, bearing the Greek name of Ocnos, Laziness, and represented as twisting a rope of broom which an ass is nibbling.[c] *Aristolaus.* *Nicophanes.* *Socrates.*

Having so far pointed out the chief painters in both branches,[d] we will also mention those of the rank next to the first: Aristoclides who decorated the Temple of Apollo at Delphi, Antiphilus who is praised for his Boy Blowing a Fire, and for the apartment, beautiful in itself, lit by the reflection *Aristoclides and others.*

splendescente ipsiusque pueri ore, item lanificio, in quo properant omnium mulierum pensa, Ptolemaeo venante, sed nobilissimo Satyro cum pelle pantherina, quem aposcopeuonta appellant, Aristophon Ancaeo [1] vulnerato [2] ab apro cum socia doloris Astypale [3] numerosaque tabula, in qua sunt Priamus, Helena, Credulitas, Ulixes, Deiphobus, Dolus.[4]

139 Androbius pinxit Scyllum ancoras praecidentem Persicae classis, Artemon Danaen mirantibus eam praedonibus, reginam Stratonicen, Herculem et Deianiram, nobilissimas autem, quae sunt in Octaviae operibus, Herculem ab Oeta monte Doridos exusta mortalitate consensu deorum in caelum euntem, Laomedontis circa Herculem et Neptunum historiam; Alcimachus Dioxippum, qui pancratio Olympiae citra pulveris [5] iactum, quod vocant ἀκονιτί, vicit; Coenus stemmata.

140 Ctesilochus, Apellis discipulus, petulanti pictura innotuit, Iove Liberum parturiente depicto mitrato et muliebriter ingemescente inter obstetricia dearum, Cleon Cadmo, Ctesidemus Oechaliae expugnatione, Laodamia, Ctesicles [6] reginae Stratonices iniuria. nullo enim honore exceptus ab ea pinxit volu-

[1] Ancaeo *Gelen* Ancaeum *Detlefsen*: ancaiu B^1: angaiu B^2: anchalū *rell.*

[2] vulnerato *edd. vett.*: muineratumo *B*: vulneratū *rell.*

[3] Astypalaea *Brunn.* [4] Dolon *Caesarius.*

[5] pulveris *edd. vett.*: pueris.

[6] Ctesicles *Ian*: ctesides *B*: elesides *rell.*

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[a] Ἀποσκοπεύων, shading his eyes with his hand (Athenaeus, XIV, 629 f.). The gesture is a common one in satyrs on vases.

[b] At Artemisium, 480 B.C.

[c] Probably S. who was wife of Seleucus I Nicator, King of Nearer Asia 312–281 B.C.

[d] Heracles saved Hesione from a monster sent by Posidon

from the fire and the light thrown on the boy's face; and likewise for his Spinning-room, in which all the women are busily plying their tasks, and his Ptolemy Hunting, but, most famous of all, his Satyr with Leopard's Skin, called in Greek the Man Shading his Eyes.[a] Aristophon did an Ancaeus Wounded by the Boar, with Astypale sharing his grief, and a picture crowded with figures, among them Priam, Helen, Credulity, Odysseus, Deiphobus, Craft. Androbius painted a Scyllus Cutting the Anchor-ropes of the Persian Fleet,[b] Artemon a Danae admired by the Robbers, a Queen Stratonice,[c] and a Heracles and Deianira; but the finest of all his works, now in Octavia's Buildings, are his Heracles Ascending to Heaven with the consent of the Gods after his mortal remains were burnt on Mount Oeta in Doris, and the story of Laomedon in the matter of Heracles and Posidon.[d] Alcimachus painted Dioxippus, who won the All-round Bout at Olympia 'without raising any dust,'[e] *akoniti* as the Greek word is. Coenus painted pedigrees.

Ctesilochus a pupil of Apelles became famous for a saucy burlesque painting which showed Zeus in labour[f] with Dionysus, wearing a woman's nightcap and crying like a woman, while goddesses act as midwives; Cleon for his Cadmus, Ctesidemus for his Storming of Oechalia[g] and his Laodamia. Ctesicles won notoriety by the insult he offered to Queen Stratonice,[h] because as she did not give him an honourable reception he painted a picture of her

to ravage the land of Troy after Hesione's father King Laomedon broke a promise.

[e] *I.e.* without any difficulty.

[f] Dionysus was born from Zeus' thigh.

[g] By Heracles. [h] See note *c*.

tantem cum piscatore, quem reginam amare sermo erat, eamque tabulam in portu Ephesi proposuit, ipse velis raptus. regina tolli vetuit, utriusque similitudine mire expressa. Cratinus comoedos[1] Athenis in pompeo[2] pinxit; Eutychides[3] bigam:
141 regit[4] Victoria. Eudorus scaena spectatur—idem et ex aere signa fecit—, Hippys[5] Neptuno et Victoria. Habron Amicitiam[6] et Concordiam pinxit et deorum simulacra, Leontiscus Aratum victorem cum tropaeo, psaltriam, Leon Sappho, Nearchus Venerem inter Gratias et Cupidines, Herculem tristem insaniae paenitentia, Nealces Venerem,
142 ingeniosus et sollers, . . .[7] ime siquidem, cum proelium navale Persarum et Aegyptiorum pinxisset, quod in Nilo cuius est aqua maris similis[8] factum volebat intellegi, argumento declaravit quod arte non poterat: asellum enim bibentem in litore
143 pinxit et crocodilum insidiantem ei; Oenias syngenicon, Philiscus officinam pictoris ignem conflante puero, Phalerion Scyllam, Simonides Agatharchum et Mnemosynen, Simus iuvenem requiescen-

[1] comoedos *Caesarius*: comoedus.

[2] pompeo *Gelen*: pompeio.

[3] Eutychides *Hermolaus Barbarus*: eutychidis *cd. Flor. Ricc. ut videtur*: euthycides *B*: euclides *cd. Par.* 6801.

[4] regis *cd. Par.* 6801: regis cum *Gelen*: quam regit *quid. apud Dalecamp*: Eutychides biga quam regit Victoria, Eudorus scaena spectatur *coni. Mayhoff*.

[5] Hippys *Keil*: Hippias *Hardouin*: Iphis *edd. vett.*: hyppis *cd. Par. Lat.* 6797: hyppus *B*: hypis *rell.*

[6] Amicitiam *edd. vett.*: amicam.

[7] *lac. Mayhoff.*

[8] cuius . . . similis *delenda esse putant Urlichs, Mayhoff.*

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[a] At the city gates; from it solemn processions started.

[b] *I.e.* apparently the river is so extensive that in the picture it might be mistaken for the sea.

romping with a fisherman with whom gossip said she was in love, and put it on exhibition at Ephesus Harbour, himself making a hurried escape on shipboard. The Queen would not allow the picture to be removed, the likeness of the two figures being admirably expressed. Cratinus painted the Comic Actors in the Processional Building[a] at Athens, Eutychides a Chariot and Pair driven by Victory. Eudorus is famous for a scene-painting—he also made bronze statues—and Hippys for his Posidon and his Victory. Habron painted a Friendship and a Harmony and figures of gods, Leontiscus an Aratus with the Trophies of Victory, and a Harpist Girl, Leon a Sappho, Nearchus Aphrodite among the Graces and the Cupids, and a Heracles in Sorrow Repenting his Madness, Nealces an Aphrodite. This Nealces was a talented and clever artist, inasmuch as when he painted a picture of a naval battle between the Persians and the Egyptians, which he desired to be understood as taking place on the river Nile, the water of which resembles[b] the sea, he suggested by inference what could not be shown by art: he painted an ass standing on the shore drinking, and a crocodile lying in wait for it.[c] Oenias has done a Family Group, Philiscus a Painter's Studio with a boy blowing the fire, Phalerion a Scylla, Simonides an Agatharchus and a Mnemosyne, Simus a Young Man Reposing, a Fuller's Shop

[c] But it is certain that the picture referred to a battle in the Persian Artaxerxes III Ochus' conquest of Egypt in 350 B.C. The Egyptians called him 'Ass' (with allusion to the ass-shaped Seth Typhon who represented the wicked foe); and the likeness of ὄνος (ass) to Ὦχος (Ochus) became a joke amongst Greeks who fought on both sides.

tem, officinam fullonis quinquatrus celebrantem, 144 idemque Nemesim egregiam, Theorus[1] se inungentem,[2] idem ab Oreste matrem et Aegisthum interfici, bellumque Iliacum pluribus tabulis, quod est Romae in Philippi porticibus, et Cassandram, quae est in Concordiae delubro, Leontium Epicuri cogitantem, Demetrium regem, Theon Orestis insaniam, Thamyram citharoedum, Tauriscus discobolum, Clytaemestram, Paniscon, Polynicen regnum repetentem et Capanea.

145 Non omittetur inter hos insigne exemplum. namque Erigonus, tritor colorum Nealcae pictoris, in tantum ipse profecit, ut celebrem etiam discipulum reliquerit Pasiam, fratrem Aeginetae pictoris.[3] illud vero perquam rarum ac memoria dignum est, suprema opera artificum inperfectasque tabulas, sicut Irim Aristidis, Tyndaridas Nicomachi, Mediam Timomachi et quam diximus Venerem Apellis, in maiore admiratione esse quam perfecta, quippe in iis liniamenta reliqua ipsaeque cogitationes artificum spectantur, atque in lenocinio commendationis dolor est manus, cum id ageret, exstinctae.

146 Sunt etiamnum non ignobiles quidem in transcursu tamen dicendi Aristocydes, Anaxander, Aristobulus Syrus, Arcesilas[4] Tisicratis filius, Coroebus[5]

[1] *V.l.* Theodorus.

[2] se inungentem *Sillig, Ian*: emungentem *B*: et inungentem *aut* et mungentem *rell.*

[3] pictoris *Detlefsen*: pictores *B*: fictoris *aut* fictores *rell.*

[4] Arcesilaus *cd. Par.* 6801: arcesillas *B.*

[5] Coroebus *Keil*: Corybas *edd. vett.*: corbios *aut* corbius *aut* cordius.

[a] Celebrated for five days, March 19th–23rd, by persons whose trades were under Minerva's patronage. The original doubtless depicted some festival of Athene.

Celebrating the Quinquatrus,[a] and also a Nemesis of great merit; Theorus a Man Anointing Himself, and also Orestes killing his Mother and Aegisthus, and the Trojan War in a series of pictures now in Philippus' Porticoes at Rome and a Cassandra, in the Shrine of Concord, a Leontion Epicurus's mistress in Contemplation, a King Demetrius; Theon a Madness of Orestes, a Thamyras the Harper; Tauriscus a Man throwing a Quoit, a Clytaemnestra, a Young Pan, a Polynices Claiming the Sovereignty,[b] and a Capaneus.

Among these artists the following remarkable case is not to be left out; the man who ground the colours for the painter Nealces, Erigonus, attained such proficiency on his own account that he actually left behind him a famous pupil, Pasias, the brother of the painter Aeginetas. It is also a very unusual and memorable fact that the last works of artists and their unfinished pictures such as the Iris of Aristides,[c] the Tyndarus' Children [d] of Nicomachus, the Medea of Timomachus and the Aphrodite of Apelles which we have mentioned, are more admired § 92. than those which they finished, because in them are seen the preliminary drawings left visible and the artists' actual thoughts, and in the midst of approval's beguilement we feel regret that the artist's hand while engaged in the work was removed by death.

There are still some artists who are not undistinguished but who only need be mentioned in passing—Aristocydes, Anaxander, Aristobulus of Syria, Arcesilas son of Tisicrates, Coroebus the pupil of

[b] Of Thebes, against his brother Eteocles.

[c] See §§ 75, 98, 108, 111.

[d] These were Castor, Polydeuces (Pollux), Helen, and Clytaemnestra.

Nicomachi discipulus, Charmantides[1] Euphranoris, Dionysodorus[2] Colophonius, Dicaeogenes,[3] qui cum Demetrio rege vixit, Euthymides,[4] Heraclides Macedo, Milon Soleus,[5] Pyromachi[6] statuarii discipuli, Mnasitheus[7] Sicyonius, Mnasitimus Aristonidae filius et discipulus, Nessus Habronis filius, Polemon Alexandrinus, Theodorus Samius et Stadius[8] Nicosthenis discipuli, Xenon, Neoclis discipulus, Sicyonius.

147 Pinxere et mulieres: Timarete, Miconis filia, Dianam, quae in tabula Ephesi est antiquissimae[9] picturae; Irene, Cratini pictoris filia et discipula, puellam, quae est Eleusine, Calypso, senem et praestigiatorem Theodorum, Alcisthenen saltatorem; Aristarete, Nearchi filia et discipula, Aesculapium. Iaia[10] Cyzicena, perpetua virgo, M. Varronis iuventa[11] Romae et penicillo pinxit et cestro in ebore imagines mulierum maxime et Neapoli anum in grandi tabula,
148 suam quoque imaginem ad speculum. nec ullius velocior in pictura manus fuit, artis vero tantum, ut multum manipretiis antecederet celeberrimos eadem aetate imaginum pictores Sopolim et Dionysium, quorum tabulae pinacothecas inplent. pinxit et

[1] Charmantides *Keil*: charmanides *B*: carmanides *rell.*
[2] Dionysodorus *Keil*: dionysiodorus.
[3] Dicaeogenes *Keil*: dicaogenes (diogenes *cd. Par.* 6801).
[4] euthymides *cd. Par. Lat.* 6797, *ut videtur*: euthymedes *cd. Par.* 6801: eutymides *B.*
[5] Soleus *Gelen*: solaeuus *B*: solus *rell.*
[6] Philomachi *edd. vett.*
[7] Mnesitheus *Hardouin.*
[8] stadius *cd. Flor. Ricc.*: statius *cd. Leid. Voss.*: stadios *rell.*: Tadius *edd. vett.*
[9] antiquissimae *B*: in antiquissimis *rell.*
[10] iaia *B*: lala *rell.*: Laia *Schneidewin*: Maia *Fröhner.*
[11] inventa *Rochette.*

[a] Of Macedon 249–287 B.C.

Nicomachus, Charmantides, the pupil of Euphranor, Dionysodorus of Colophon, Dicaeogenes resident at the court of King Demetrius,[a] Euthymides, the Macedonian Heraclides and Milon of Soli, pupils of Pyromachus, the sculptor of the human figure, Mnasitheus of Sicyon, Mnasitimus the son and pupil of Aristonides, Nessus son of Habron, Polemo of Alexandria, Theodorus of Samos and Stadius, both pupils of Nicosthenes, Xenon of Sicyon, pupil of Neocles.

There have also been women artists—Timarete the daughter of Micon who painted the extremely archaic panel picture of Artemis at Ephesus, Irene daughter and pupil of the painter Cratinus who did the Maiden at Eleusis, a Calypso,[b] an Old Man and Theodorus the Juggler, and painted also Alcisthenes the Dancer; Aristarete the daughter and pupil of Nearchus, who painted an Asclepius. When Marcus Varro was a young man, Iaia of Cyzicus, who never married, painted pictures with the brush at Rome (and also drew with the *cestrum* or graver[c] on ivory), chiefly portraits of women, as well as a large picture on wood of an Old Woman at Naples, and also a portrait of herself, done with a looking-glass. No one else had a quicker hand in painting, while her artistic skill was such that in the prices she obtained she far outdid the most celebrated portrait painters of the same period, Sopolis and Dionysius, whose pictures fill the galleries. A certain Olympias also painted; the

Women artists.

116–26 B.C.

[b] Or, if Calypso is the name of a woman artist, . . . 'Eleusis, Calypso, who painted an Old Man . . .'.

[c] The *cestrum* was, it seems, a graver, spoon-shaped at one end (for holding colours over heat), and with the handle-end thickened or flattened out for levelling the colours.

quaedam Olympias, de qua hoc solum memoratur, discipulum eius fuisse Autobulum.

149 XLI. Encausto pingendi duo fuere antiquitus genera, cera et in ebore cestro, id est vericulo,[1] donec classes pingi coepere. hoc tertium accessit resolutis igni ceris penicillo utendi, quae pictura navibus nec sole nec sale ventisve corrumpitur.

150 XLII. Pingunt et vestes in Aegypto, inter pauca mirabili genere, candida vela, postquam attrivere, inlinentes non coloribus, sed colorem sorbentibus medicamentis. hoc cum fecere, non apparet in velis, sed in cortinam pigmenti ferventis mersa post momentum extrahuntur picta. mirumque, cum sit unus in cortina colos, ex illo alius atque alius fit in veste accipientis medicamenti qualitate mutatus, nec postea ablui potest. ita cortina, non dubie confusura colores, si pictos acciperet, digerit ex uno pingitque, dum coquit, et adustae eae vestes firmiores usibus fiunt quam si non urerentur.

151 XLIII. De pictura satis superque. contexuisse his et plasticen conveniat. eiusdem opere[2] terrae fingere ex argilla similitudines Butades Sicyonius

[1] vericulo *Sillig*: viriculo. *Verba* id est vericulo *fortasse delenda*.

[2] operae *B, cd. Leid. Voss. m.2*: opere *rell.*: operis *coni. Mayhoff*.

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[a] These words look like a gloss. Pliny has already mentioned the *cestrum* in § 147. The two kinds of encaustic painting here mentioned are with wax and graver on wood, and with wax and graver on ivory.

[b] Far back though it is, Pliny seems to refer to § 1 of this book. But the right reading is not certain.

only fact recorded about her is that Autobulus was her pupil.

Encaustic.

XLI. In early days there were two kinds of encaustic painting, with wax and on ivory with a graver or *cestrum* (that is a small pointed graver [a]); but later the practice came in of decorating battleships. This added a third method, that of employing a brush, when wax has been melted by fire; this process of painting ships is not spoilt by the action of the sun nor by salt water or winds.

Egyptian dyeing.

XLII. In Egypt they also colour cloth by an exceptionally remarkable kind of process. They first thoroughly rub white fabrics and then smear them not with colours but with chemicals that absorb colour. When this has been done, the fabrics show no sign of the treatment, but after being plunged into a cauldron of boiling dye they are drawn out a moment later dyed. And the remarkable thing is that although the cauldron contains only one colour, it produces a series of different colours in the fabric, the hue changing with the quality of the chemical employed, and it cannot afterwards be washed out. Thus the cauldron which, if dyed fabrics were put into it, would undoubtedly blend the colours together, produces several colours out of one, and dyes the material in the process of being boiled; and the dress fabrics when submitted to heat become stronger for wear than they would be if not so heated.

Plastic art. Early stages. Butades and others.

XLIII. Enough and more than enough has now been said about painting. It may be suitable to append to these remarks something about the plastic art. It was through the service of that same earth [b] that modelling portraits from clay was

figulus primus invenit Corinthi filiae opera, quae capta amore iuvenis, abeunte illo peregre, umbram ex facie eius ad lucernam in pariete lineis circumscripsit, quibus pater eius inpressa argilla typum fecit et cum ceteris fictilibus induratum igni proposuit, eumque servatum in Nymphaeo, donec
152 Mummius Corinthum everterit, tradunt. sunt qui in Samo primos omnium plasticen invenisse Rhoecum et Theodorum tradant multo ante Bacchiadas Corintho pulsos, Damaratum vero ex eadem urbe profugum, qui in Etruria Tarquinium regem populi Romani genuit, comitatos fictores Euchira, Diopum, Eugrammum; ab iis Italiae traditam plasticen. Butadis inventum est rubricam addere aut ex rubra creta fingere, primusque personas tegularum extremis imbricibus inposuit, quae inter initia prostypa vocavit; postea idem ectypa fecit. hinc et fastigia templorum orta. propter hunc plastae appellati.
153 XLIV. Hominis autem imaginem gypso e facie ipsa primus omnium expressit ceraque in eam formam gypsi infusa emendare instituit Lysistratus Sicyonius, frater Lysippi, de quo diximus. hic et similitudines[1] reddere instituit; ante eum quam

[1] similitudines *Sillig*: similitudini *coni. Mayhoff*: similitudinis *B*: similitudinem *rell.*

[a] Traditionally they invented the art of casting bronze, not of making casts in clay.

[b] Of these fictitious names *Eucheir* means 'skilful-handed,' and *Eugrammus* 'skilled drawer.' *Diopus* would be connected with διόπτρα, an instrument for taking levels.

[c] In low relief.

[d] In high relief.

first invented by Butades, a potter of Sicyon, at Corinth. He did this owing to his daughter, who was in love with a young man; and she, when he was going abroad, drew in outline on the wall the shadow of his face thrown by a lamp. Her father pressed clay on this and made a relief, which he hardened by exposure to fire with the rest of his pottery; and it is said that this likeness was preserved in the Shrine of the Nymphs until the destruction of Corinth by 146 B.C.
Mummius. Some authorities state that the plastic art was first invented by Rhoecus and Theodorus[a] at Samos, long before the expulsion of the Bacchiadae 581–580 B.C.
from Corinth, but that when Damaratus, who in Etruria became the father of Tarquin king of the *trad.* 616–578 B.C.
Roman people, was banished from the same city, he was accompanied by the modellers Euchir, Diopus and Eugrammus,[b] and they introduced modelling to Italy. The method of adding red earth to the material or else modelling out of red chalk, was an invention of Butades, and he first placed masks as fronts to the outer gutter-tiles on roofs; these at the first stage he called *prostypa*,[c] but afterwards he likewise made *ectypa*.[d] It was from these that the ornaments on the pediments of temples originated. Because of Butades modellers get their Greek name of *plastae*.

XLIV. The first person who modelled a likeness in plaster of a human being from the living face itself, and established the method of pouring wax into this plaster mould and then making final corrections on the wax cast, was Lysistratus of Sicyon, *Lysistratus.*
the brother of Lysippus of whom we have spoken. XXXIV, 61.
Indeed he introduced the practice of giving likenesses, the object aimed at previously having been to

pulcherrimas facere studebant. idem et de signis effigies exprimere invenit, crevitque res in tantum, ut nulla signa statuaeve sine argilla fierent. quo apparet antiquiorem hanc fuisse scientiam quam fundendi aeris.

154 XLV. Plastae laudatissimi fuere Damophilus et Gorgasus, iidem pictores, qui Cereris aedem Romae ad circum maximum utroque genere artis suae excoluerant, versibus inscriptis Graece, quibus significarent ab dextra opera Damophili esse, ab laeva [1] Gorgasi. ante hanc aedem Tuscanica omnia in aedibus fuisse auctor est Varro, et ex hac, cum reficeretur, crustas parietum excisas tabulis marginatis inclusas esse, item signa ex fastigiis dispersa.

155 fecit et Chalcosthenes cruda opera Athenis, qui locus ab officina eius Ceramicos appellatur. M. Varro tradit sibi cognitum Romae Possim nomine, a quo facta poma et uvas ut non posses [2] aspectu discernere a veris.[3] idem magnificat Arcesilaum, L. Luculli familiarem, cuius proplasmata [4] pluris venire solita artificibus ipsis quam aliorum

156 opera; ab hoc factam Venerem Genetricem in foro Caesaris et, priusquam absolveretur, festinatione

[1] ab laeva *Gronov*: a parte laeva *cd. Par.* 6801: ab imia *B*: aplane *aut* aplone *rell.*

[2] ut non posses *Hardouin* (u. n. possis *Gronov*): nemo posset *Mayhoff*: non possis *Ian*: ita ut non sit *Gelen*: alitem nescisse *Traube*: item pisces *B*: item piscis *rell.* (poscis *cd. Par. Lat.* 6797): item pisces quos *cd. Poll.*

[3] veris vix posses *cd. Poll.*

[4] proplasmata *Gelen*: propriasmata *B*: proplasticen *edd. vett.*: plastica *cd. Par.* 6801: pleurosamta *rell.*

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[a] Dedicated in 493 B.C. [b] See XXXIV, 34.

[c] It was restored (after the fire of 31 B.C.) by Augustus in 27 B.C. [d] Or Caecosthenes (= Καϊκοσθένης)? cf. XXXIV. 87.

make as handsome a face as possible. The same artist also invented taking casts from statues, and this method advanced to such an extent that no figures or statues were made without a clay model. This shows that the knowledge of modelling in clay was older than that of casting bronze.

XLV. Most highly praised modellers were Damophilus and Gorgasus, who were also painters; they had decorated the Shrine[a] of Ceres in the Circus Maximus at Rome with both kinds of their art, and there is an inscription on the building in Greek verse in which they indicated that the decorations on the right hand side were the work of Damophilus and those on the left were by Gorgasus. Varro states that before this shrine was built everything in the temples was Tuscanic work[b]; and that when this shrine was undergoing restoration,[c] the embossed work of the walls was cut out and enclosed in framed panels; and that the figures also were taken from the pediment and dispersed. Chalcosthenes[d] also executed at Athens some works in unbaked clay, at the place named the Ceramicus, Potters Quarter, after his workshop. Marcus Varro records that he knew at Rome an artist named Possis who made fruit and grapes in such a way that nobody could tell by sight from the real things. Varro also speaks very highly of Arcesilaus, who was on terms of intimacy with Lucius Lucullus, and says that his sketch-models of clay used to sell for more, among artists themselves, than the finished works of others; and that this artist made the statue of Venus Genetrix in Caesar's Forum and that it was erected before it was finished as there was a great haste to dedicate it; and that the same artist had

Damophilus Gorgasus, and others.

Arcesilaus. c. 110–56 B.C.

46 B.C.

dedicandi positam; eidem a Lucullo HS |X|[1] signum Felicitatis locatum, cui mors utriusque inviderit; Octavio equiti Romano cratera facere volenti exemplar e gypso factum talento. laudat et Pasitelen, qui plasticen matrem caelaturae et statuariae scalpturaeque[2] dixit et, cum esset in omnibus iis summus, nihil umquam fecit ante quam finxit.
157 praeterea elaboratam hanc artem Italiae et maxime Etruriae; Vulcam[3] Veis accitum, cui locaret Tarquinius Priscus Iovis effigiem in Capitolio dicandam; fictilem eum fuisse et ideo miniari solitum; fictiles in fastigio templi eius quadrigas, de quibus supra[4] diximus; ab hoc eodem factum Herculem, qui hodieque materiae nomen in urbe retinet. hae enim tum effigies deorum erant lautissimae, nec paenitet nos illorum, qui tales eos coluere; aurum enim et argentum ne diis quidem conficiebant.
158 XLVI. durant etiam nunc plerisque in locis talia simulacra; fastigia quidem templorum etiam in urbe crebra et municipiis, mira caelatura et arte suique firmitate, sanctiora auro, certe innocentiora. in sacris quidem etiam inter has opes hodie non

[1] |X| *Detlefsen*: $\overline{\text{LX}}$ *Sillig*: IXI *B*: LX *rell.*
[2] scalpturae *B*[1]: sculpturae *B*[2]: scalturae *rell.*
[3] uulcam *B*[1]: uulcani *B*[2]: uulgam *rell.* (turianum *cd. Par.* 6801): Volcaniam *coni. Ian.*
[4] supra *coni. Ian*: saepe.

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[a] Since Arcesilaus was still doing work for Caesar in 46 B.C., it may well be that the Lucullus here mentioned is the one who was killed at Philippi in 42 B.C.
[b] The Hercules Fictilis, 'Hercules in Clay.'

contracted with Lucullus to make a statue of Happiness for 1,000,000 sesterces, which was prevented by the death of both parties [a]; and that when a Knight of Rome Octavius desired him to make a wine-bowl he made him a model in plaster for the price of a talent. He also praises Pasiteles, who said that *Pasiteles.* modelling was the mother of chasing and of bronze statuary and sculpture, and who, although he was eminent in all these arts, never made anything before he had made a clay model. He also states that this art had already been brought to perfection by Italy and especially by Etruria; that Vulca was summoned from Veii to receive the contract from Tarquinius Priscus for a statue of Jupiter to be *trad.* 616-578 B.C. consecrated in the Capitol, and that this Jupiter was made of clay and consequently was regularly painted with cinnabar; and that the four-horse VIII, 161, XXVIII, 16. chariots about which we spoke above on the pediment of the temple were modelled in clay; and that the figure of Hercules, which even to-day retains in the city the name [b] of the material it is made of, was the work of the same artist. For these were the most splendid images of gods at that time; and we are not ashamed of those ancestors of ours for worshipping them in that material. For they used not formerly to work up silver and gold even for gods. XLVI. Statues of this kind are still to be found at various places. In fact even at Rome and in the Municipal Towns there are many pediments of temples, remarkable for their carving and artistic merit and intrinsic durability, more deserving of respect than gold, and certainly less baneful. At the present day indeed, even in the midst of our present rich resources the preliminary libation is

murrinis crystallinisve, sed fictilibus prolibatur simpulis,[1] inenarrabili Terrae benignitate, si quis singula aestimet, etiam ut omittantur in frugum,
159 vini, pomorum, herbarum et fruticum, medicamentorum, metallorum generibus beneficia eius, quae[2] adhuc diximus. neque[3] adsiduitate satiant figlinarum opera, doliis ad vina excogitatis, ad aquas tubulis,[4] ad balineas mammatis,[5] ad tecta imbricibus,[6] coctilibus laterculis ad parietes fundamentaque,[7] aut quae[8] rota fiunt, propter quae[9] Numa
160 rex septimum collegium figulorum instituit. quin et defunctos sese multi fictilibus soliis condi maluere, sicut M. Varro, Pythagorio modo in myrti et oleae atque populi nigrae foliis. maior pars hominum terrenis utitur vasis. Samia etiam nunc in esculentis laudantur. retinent hanc nobilitatem et Arretium in Italia et calicum tantum Surrentum, Hasta, Pollentia, in Hispania Saguntum, in Asia
161 Pergamum. habent et Trallis ibi opera sua et in Italia Mutina, quoniam et sic gentes nobilitantur et haec quoque per maria, terras ultro citro portantur, insignibus rotae officinis.[10] Erythris in templo hodieque ostenduntur amphorae duae propter tenuitatem consecratae discipuli magistrique certamine,

[1] simpulis *edd. vett.*: sin puls B^1: sinpulsa B^2: simpuuiis *cd. Par.* 6801: simpuis *rell.*

[2] *V.ll.* quaeque, que quae: quaequae *Detlefsen.*

[3] neque *Mayhoff*: vel quae *B*: vel *rell.*

[4] *V.l.* tabulis.

[5] hamatis *Hermolaus Barbarus.*

[6] imbricibus *hic Mayhoff*: *supra post* opera.

[7] ad parietes fundamentaque *coni. Mayhoff* (ad fundamenta *Detlefsen*): fundamentisque.

[8] ob quae *Hardouin*: quae aut *Detlefsen.*

[9] rota fiunt propter quae *B*: *om. rell.* *In* § 159 *alia temptant edd.*

[10] officiis *coni. Rackham.*

made at sacrifices not from fluor-spar or crystal vessels but with small ladles of earthenware, thanks to the ineffable kindness of Mother Earth, if one considers her gifts in detail, even though we omit her blessings in the various kinds of corn, wine, fruit, herbs and shrubs, drugs and metals, all the things that we have so far mentioned. Nor do our *Pottery.* products even in pottery satisfy our needs with their unfailing supply, with jars invented for our wine, and pipes for water, conduits for baths, tiles for our roofs, baked bricks for our house-walls and foundations, or things that are made on a wheel, because of which King Numa established a seventh Guild, the *trad.* 715–672 B.C. Potters.[a] Indeed moreover many people have preferred to be buried in earthenware coffins, for instance Marcus Varro who was interred in the Pythagorean style, in leaves of myrtle, olive and 26 B.C. black poplar; the majority of mankind employs earthenware receptacles for this purpose. Among table services Samian pottery is still spoken highly of; this reputation is also retained by Arezzo in Italy, and, merely for cups, by Sorrento, Asti, and Pollenza, and by Saguntum in Spain and Pergamum in Asia Minor. Also Tralles in Asia Minor and Modena in Italy have their respective products, since even this brings nations fame, and their products also, so distinguished are the workshops of the potter's wheel, are carried to and fro across land and sea. In a temple at Erythrae even to-day are on view two wine-jars which were dedicated on account of their fine material, owing to a competition between a master potter and his apprentice as to which

[a] The text of part of § 159 is very uncertain.

uter tenuiorem humum duceret. Cois ea laus[1] maxima, Hadrianis firmitas, nonnullis circa hoc
162 severitatis quoque exemplis. Q. Coponium invenimus ambitus damnatum, quia vini amphoram dedisset dono ei, cui suffragi latio erat. atque ut e luxu[2] quoque aliqua contingat auctoritas figlinis: tripatinium, inquit Fenestella, appellabatur summa cenarum lautitia; una erat murenarum, altera luporum, tertia mixti piscis, inclinatis iam scilicet moribus, ut tamen eos praeferre Graeciae etiam philosophis possimus, siquidem in Aristotelis heredum auctione septuaginta patinas venisse traditur.
163 nos cum unam Aesopi tragoediarum histrionis in natura avium diceremus HS $\overline{\text{C}}$[3] stetisse, non dubito indignatos legentes. at, Hercules, Vitellius in principatu suo $|\overline{\text{X}}|$[4] HS condidit patinam, cui faciendae fornax in campis exaedificata erat, quoniam eo pervenit luxuria, ut etiam fictilia pluris constent
164 quam murrina. propter hanc Mucianus altero consulatu suo in conquestione exprobravit patinarum paludes Vitelli memoriae, non illa foediore, cuius veneno Asprenati reo Cassius Severus accusator
165 obiciebat interisse convivas CXXX. nobilitantur his quoque oppida, ut Regium et Cumae. Samia testa

[1] ea laus *Mayhoff*: illa laus *Urlichs*: levitas *Fröhner*: laus.
[2] e luxu *coni. Ian*: fruxu *aut* frucu *aut* fruxo *cdd.* (fluxu *cd. Poll.*).
[3] $\overline{\text{C}}$ *cd. Leid. Voss.* [C] *B*: C' *aut* centum *aut* DC *rell.*
[4] $|\overline{\text{X}}|$ *B*: $\overline{\text{X}}$ *aut* X *rell.*

would make thinner earthenware. The pottery of Cos is most famous for this, but that of Adria is most substantial; while there are also some instances of severity also in relation to pottery. We find that Quintus Coponius was found guilty of bribery because he made a present of a jar of wine to a person who had the right to a vote. And so that luxury also may contribute some importance to earthenware, the name of a service of three dishes, we are told by Fenestella, used to denote the most luxurious possible banquet: one dish was of lamprey, a second of pike and a third of a mixture of fish. Clearly manners were already on the decline, though nevertheless we can still prefer them even to those of the philosophers of Greece, inasmuch as it is recorded that at the auction held by the heirs of 322 B.C.
Aristotle seventy earthenware dishes were sold. We have already stated when on the subject of birds X. 141.
that a single dish cost the tragic actor Aesop 100,000 sesterces, and I have no doubt that readers felt indignant; but, good heavens, Vitellius when emperor had a dish made that cost 1,000,000 sesterces, A.D. 69
and to make which a special furnace was constructed out in open country, as luxury has reached a point when even earthenware costs more than vessels of fluor-spar. It was owing to this dish that Mucianus in his second consulship, in a protest A.D. 70.
which he delivered, reproached the memory of Vitellius for dishes as broad as marshes, although this particular dish was not more disgraceful than the poisoned one by which Cassius Severus when prosecuting Asprenas charged him with having caused the death of 130 guests. Artistic pottery also confers fame on towns, for instance Reggio and Cumae.

Matris deum[a] sacerdotes, qui Galli vocantur, virilitatem amputare nec aliter citra perniciem, M. Caelio credamus, qui linguam sic amputandam obiecit gravi probro, tamquam et ipse iam tunc eidem Vitellio malediceret. quid non excogitat vita[1] fractis etiam testis utendo, sic ut firmius durent, tunsis calce addita, quae vocant Signina! quo genere etiam pavimenta excogitavit.

166 XLVII. Verum et ipsius terrae sunt alia commenta. quis enim satis miretur pessumam eius partem ideoque pulverem[b] appellatam in Puteolanis collibus opponi maris fluctibus, mersumque protinus fieri lapidem unum inexpugnabilem undis et fortiorem cotidie, utique si Cumano misceatur cae-
167 mento? eadem est terrae natura et in Cyzicena regione, sed ibi non pulvis, verum ipsa terra qua libeat magnitudine excisa et demersa in mare lapidea extrahitur. hoc idem circa Cassandream[c] produnt fieri, et in fonte Cnidio dulci intra octo menses terram lapidescere. ab Oropo quidem Aulida[d] usque quidquid attingitur mari terrae mutatur in saxa. non multum a pulvere Puteolano

[1] excogitat vita *B*: excogitavit vita *Ian*: excogitavit ars *cd. Par.* 6801: excogitavit a *rell.*

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[a] Cybele.
[b] Volcanic ash or earth, now called *pozzolana*.
[c] The ancient Potidaea in the Chalcidic peninsula.
[d] Of Boeotia.

The priests of the Mother [a] of the Gods called Galli castrate themselves, if we accept the account of Marcus Caelius, with a piece of Samian pottery, the only way of avoiding dangerous results; and Caelius proposed as a penalty for an abominable offence that the guilty person should have his tongue cut out in the same way, just as if he were already himself inveighing against the same Vitellius in anticipation. What is there that experience cannot devise? For it employs even broken crockery, making it more solid and durable by pounding it up and adding what is called Segni lime, a kind of material used in a method which experience has also invented for making pavements.

XLVII. But there are other inventions also that belong to Earth herself. For who could sufficiently marvel at the fact that the most inferior portion of the earth's substance, which is in consequence designated dust,[b] on the hills of Pozzuoli, encounters the waves of the sea and as soon as it is submerged turns into a single mass of stone that withstands the attacks of the waves and becomes stronger every day, especially if it mixed with broken quarry-stone from Cumae? In the Cyzicus district also the nature of the earth is the same, but there not dust but the earth itself is cut out in blocks of any size wanted and plunged into the sea; and when drawn out, it is of the consistency of stone. The same is said to take place in the neighbourhood of Cassandrea,[c] and it is stated that in a fresh water spring at Cnidus earth becomes petrified in less than eight months. Or the coast [d] from Oropus to Aulis all the earth that the sea touches is turned into rocks. The finest portion of the sand from the Nile is not very different

Pozzolana and other earths.

distat e Nilo harena tenuissima sui parte, non ad sustinenda maria fluctusque frangendos, sed ad
168 debellanda corpora palaestrae studiis. inde certe Patrobio, Neronis principis liberto, advehebatur. quin et Cratero et Leonnato ac Meleagro, Alexandri Magni ducibus, sabulum[1] hoc portari[2] cum reliquis militaribus commerciis reperio, plura de hac parte non dicturus, non, Hercules, magis quam de terrae usu in ceromatis, quibus exercendo iuventus nostra
169 corporis vires perdit animorum. XLVIII. quid? non in Africa Hispaniaque e terra parietes, quos appellant formaceos, quoniam in forma circumdatis II utrimque tabulis inferciuntur verius quam struuntur, aevis durant, incorrupti imbribus, ventis, ignibus omnique caemento firmiores? spectat etiam nunc speculas Hannibalis Hispania terrenasque turres iugis montium inpositas. hinc et caespitum natura castrorum vallis accommodata contraque fluminum impetus aggeribus. inlini quidem crates parietum luto et ut[3] lateribus crudis exstrui quis ignorat?

170 XLIX. Lateres non sunt ex sabuloso neque harenoso multoque minus calculoso ducendi solo, sed e cretoso et albicante aut ex rubrica vel etiam e

[1] sabulum *cd. Par.* 6801, *cd. Par. Lat.* 6797 sabium *B*: sablum *rell.*: solitum *Mayhoff.*
[2] *V.l.* portare: portavere *J. Müller.*
[3] et ut *Warmington*: et.

[a] Who was in Spain 221–219 B.C. preparing war against Rome.

from the dust of Pozzuoli, not to be used for an embankment against the sea and to act as a breakwater against waves, but for the purpose of subduing men's bodies for the exercises of the wrestling school. At all events it used to be imported from there for Patrobius, a freedman of the emperor Nero, and moreover I also find that this sand was carried with other military commodities for Alexander the Great's generals Craterus, Leonnatus and Meleager, though I shall not say more about this part of the subject any more than, by heaven, I shall mention the use of earth in making ointments, employed by our young men while ruining their vigour of mind by exercising their muscles. XLVIII. Moreover, are there not in Africa and Spain walls made of earth that are called framed walls, because they are made by packing in a frame enclosed between two boards, one on each side, and so are stuffed in rather than built, and do they not last for ages, undamaged by rain, wind and fire, and stronger than any quarry-stone? Spain still sees the watchtowers of Hannibal [a] and turrets of earth placed on the mountain ridges. From the same source is also obtained the substantial sods of earth suitable for the fortifications of our camps and for embankments against the violent flooding of rivers. At all events everybody knows that party-walls can be made by coating hurdles with clay, and are thus built up as if with raw bricks.

XLIX. Bricks should not be made from a sandy or gravelly soil and far less from a stony one, but from a marly and white soil or else from a red earth; or even with the aid of sand, at all events if coarse male sand is used. The best time for making bricks *Bricks.*

sabulo, masculo certe. finguntur optime vere, nam solstitio rimosi fiunt. aedificiis non nisi bimos probant; quin [1] et intritam ipsam eorum, priusquam fingantur, macerari oportet.

171 Genera eorum fiunt [2] tria: didoron,[3] quo nos [4] utimur, longum sesquipedem, latum pedem, alterum tetradoron, tertium pentadoron. Graeci enim antiqui δῶρον palmum vocabant et ideo δῶρα munera, quia manu darentur; ergo a quattuor et quinque palmis, prout sunt, nominantur. eadem est et latitudo. minore privatis operibus, maiore in publicis utuntur in Graecia. Pitanae in Asia et in ulteriore Hispania civitatibus Maxilua et Callet [5] fiunt lateres, qui siccati non merguntur in aqua. sunt enim e terra pumicosa, cum subigi potest, utilissima.

172 Graeci, praeterquam ubi e silice fieri poterat structura, latericios parietes praetulere. sunt enim aeterni, si ad perpendiculum fiant. ideo et publica opera et regias domos sic struxere: murum Athenis, qui ad montem Hymettum spectat, Patris aedes Iovis et Herculis, quamvis lapideas columnas et epistylia circumdarent, domum Trallibus regiam Attali, item Sardibus Croesi, quam gerusian fecere,

[1] quia *Mayhoff.*

[2] fiunt *Mayhoff coll. Vitruv.* II. 3: qui *B*: que *rell.*

[3] didoron *Hermolaus Barbarus*: lydion (lidron *cd. Par.* 6801).

[4] nos *add. Mayhoff coll. Vitruv.*: volgo *J. Müller.*

[5] Callet *Urlichs, Detlefsen coll.* III. 12: callent *B*: canlent *aut* canlento *aut* calento *rell.*

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[a] As a measure this could be 4 inches or 9, but here it is 9.

[b] *Silex* is in particular the strong concrete made by the Romans from a lava mixed with lime and *pozzolana* (for which see § 166, note); but in Greece *silex* would be limestone.

[c] Attalus I of Pergamum, 241–197 B.C.

is in spring, as at midsummer they tend to crack. For buildings, only bricks two years old are recommended; moreover the material for them when it has been pounded should be well soaked before they are moulded.

Three kinds of bricks are made: the 'didoron,' the one employed by us, eighteen inches long and a foot wide, second the 'tetradoron' and third the 'pentadoron,' *doron* being an old Greek word meaning the palm of the hand [a]—from which comes *doron*, meaning a gift, because a gift was given by the hand. Consequently the bricks get their names from four or five palms' length as the case may be. Their breadth is in all cases the same. In Greece the smaller kind is used for private structures and the larger in public buildings. At Pitana in Asia Minor as also in the city states of Maxilua and Callet in Further Spain bricks are made which when dried will not sink in water, being made of pumice-like earth, which is an extremely useful material when it is capable of being worked. The Greeks preferred brick walls except in places permitting of a limestone [b] structure, as brick walls last for ever if built exactly perpendicular. Consequently that was how they built both public works and kings' palaces—the wall at Athens that faces towards Mount Hymettus, at Patrae the Shrines of Zeus and of Heracles (although the columns and architraves with which they surrounded these were of stone), and the royal palace of Attalus [c] at Tralles and likewise the palace of Croesus at Sardis, which 560–546 B.C.
they converted into a house of elders,[d] and that of

[d] Pliny's source Vitruvius II. 8. 10 takes γερουσία here as a home for the aged, but it must mean council-house.

Halicarnasi Mausoli, quae etiam nunc durant.
173 Lacedaemone quidem latericiis parietibus excisum opus tectorium propter excellentiam picturae ligneis formis inclusum Romam deportavere in aedilitate ad comitium exornandum Murena et Varro. cum opus per se mirum esset, tralatum tamen magis mirabantur. in Italia quoque latericius murus Arreti et Mevaniae est. Romae non fiunt talia aedificia, quia sesquipedalis paries non plus quam unam contignationem tolerat, cautumque est, ne communis crassior fiat, nec intergerivorum ratio patitur.

174 L. Haec sint dicta de lateribus. in terrae autem reliquis generibus vel maxime mira natura est sulpuris, quo plurima domantur. nascitur in insulis Aeoliis inter Siciliam et Italiam, quas ardere diximus, sed nobilissimum in Melo insula. in Italia quoque invenitur in Neapolitano Campanoque agro collibus, qui vocantur Leucogaei. ibi e cuniculis effossum
175 perficitur igni. genera IIII: vivum, quod Graeci apyron vocant, nascitur solidum[1] solum[2]—cetera[3] enim liquore constant et conficiuntur oleo incocta—; vivum effoditur tralucetque et viret. solo ex omnibus generibus medici utuntur.[4] alterum genus appellant glaebam, fullonum tantum officinis fa-

[1] solidum hoc est glaeba *cdd.*: *del.* h.e.g. *Urlichs, Detlefsen.*

[2] solum *del. Urlichs, Detlefsen.*

[3] cetera *cd. Leid. Voss. m.*2: ex omnibus generibus (*om. B*) medici utuntur. alterum genus cetera *B, cd. Leid. Voss. m.*1, *cd. Flor. Ricc.*: *vide infra*: ex omnibus . . . utuntur cetera *rell.*

[4] solo . . . utuntur *om. cd. Par. Lat.* 6797, *cd. Par.* 6801, *cd. Tolet.*

Mausolus [a] at Halicarnassus, buildings still standing. 377–353 B.C. Murena and Varro in their aedileship had some plaster work on brick walls at Sparta cut away, and because of the excellence of its painting had it enclosed in wooden frames and brought to Rome to decorate the Assembly-place. It was in itself a wonderful piece of work, yet its transfer caused even more admiration. In Italy also there is a brick wall at Arezzo and at Mevania. Structures of this sort are not erected in Rome, because an eighteen-inch wall will only carry a single storey, and there is a regulation forbidding any partition exceeding that thickness: nor does the system used for party-walls permit of it.

L. Let this be what we say about bricks. Among *Sulphur.* the other kinds of earth the one with the most remarkable properties is sulphur, which exercises a great power over a great many other substances. Sulphur occurs in the Aeolian Islands between Sicily and Italy, which we have said are volcanic, but the most III, 92 ff. famous is on the island of Melos. It is also found in Italy, in the territory of Naples and Campania, on the hills called the Leucogaei. It is there dug out of mine-shafts and dressed with fire. There are four kinds: live sulphur, the Greek name for which means 'untouched by fire,' which alone forms as a solid mass—for all the other sorts consist of liquid and are prepared by boiling in oil; live sulphur is dug up, and it is translucent and of a green colour; it is the only one of all the kinds that is employed by doctors. The second kind is called 'clod-sulphur,' and is commonly found only in fullers'

[a] The remains of his monument the Mausoleum were brought to England in 1859.

miliare. tertio quoque generi unus tantum est usus ad lanas suffiendas,[1] quoniam candorem mollitiamque confert. egula vocatur hoc genus, quartum autem[2] ad ellychnia maxime conficienda; cetero tantum[3] vis est ut morbos comitiales deprehendat nidore inpositum igni. lusit et Anaxilaus eo, addens in calicem vini prunaque subdita circumferens, exardescentis repercussu[4] pallorem dirum velut
176 defunctorum effundente in[5] conviviis.[6] natura eius excalfacit, concoquit, sed et discutit collectiones corporum, ob hoc talibus[7] emplastris malagmatisque miscetur. renibus quoque et lumbis in dolore cum adipe mire prodest inpositum. aufert et lichenas faciei cum terebinthi resina et lepras; harpax ita vocatur a celeritate praebendi,[8] avelli enim subinde
177 debet. prodest et suspiriosis linctu,[9] purulenta quoque extussientibus et contra scorpionum ictus. vitiligines vivum nitro mixtum atque ex aceto tritum et inlitum tollit, item lendes, et in palpebris aceto sandaracato admixtum. habet et in religionibus locum ad expiandas suffitu domos. sentitur vis eius et in aquis ferventibus, neque alia res facilius accen-

[1] suffiendas *coll. Isid. Gelen*: sufficiendas.
[2] autem *cd. Par.* 6801: caute *rell.* (cate *cd. Leid. Voss.*: aptum *Isid.*): *coni.* καυτήρ *Mayhoff.*
[3] tanta *cd. Par.* 6801 *ex Isid.*: tamen *vel* vis tantum *coni. Mayhoff.*
[4] repercussu *edd. vett. ex Isid.*: percussu *B*: supercussu *aut* se percussu *rell.*
[5] effundente in *Mayhoff*: effundentem *B*: effundente *rell.*
[6] convivis *B.*
[7] albis *Fröhner.*
[8] praebendi *B*: uellendi *cd. Par.* 6801: praeuelli *rell.* avellendi *edd. vett.*: prendendi *Ian.*
[9] linctu *Sillig*: linctum *aut* linctus *aut* lictus *cdd.* (unctu *B*).

workshops. The third kind also is only employed for one purpose, for smoking woollens from beneath, as it bestows whiteness and softness; this sort is called egula. The fourth kind is specially used for making lamp-wicks. For the rest, sulphur is so potent that when put on the fire it detects epilepsy by its smell. Anaxilaus even made a sport with it by putting some in a cup of wine and placing a hot coal underneath and handing it round at dinner-parties, when by its reflection as it flared up it threw on their faces a dreadful pallor as if they were dead. Its property is calorific and concoctive,[a] but it also disperses abscesses on the body, and consequently is used as an ingredient in plasters and poultices for such cases. It is also remarkably beneficial for the kidneys and loins if in cases of pain it is applied to them with grease. In combination with turpentine it also removes lichenous growths on the face and leprosy; so it is called *harpax*,[b] owing to the speed with which it has to be applied, which is caused by the need for immediate removal. Used as an electuary it is good for cases of asthma, and also purulent expectoration after coughing and as a remedy for the sting of scorpions. Live sulphur mixed with soda and pounded in vinegar and used as a liniment removes cutaneous eruptions, and also eggs of lice, and in combination with vinegar mixed with realgar it is useful on the eyelids. Sulphur also has a place in religious ceremonies, for the purpose of purifying houses by fumigation. Its potency is also perceptible in hot springs of water, and no other substance is more easily ignited,

[a] *I.e.* brings boils, etc., to a head.

[b] ἅρπαξ 'rapacious,' from ἁρπάζω, 'seize,' 'snatch.'

ditur, quo apparet ignium vim magnam ei inesse. fulmina, fulgura quoque sulpuris odorem habent, ac lux ipsa eorum sulpurea est.

178 LI. Et bituminis vicina natura est. aliubi limus, aliubi terra est, limus e Iudaeae lacu, ut diximus, emergens, terra in Syria circa Sidonem oppidum maritimum. spissantur haec utraque et in densitatem coeunt. est vero liquidum bitumen, sicut Zacynthium et quod a Babylone invehitur; ibi quidem et candidum gignitur. liquidum est et Apolloniaticum, quae omnia Graeci pissasphalton
179 appellant ex argumento picis ac bituminis. gignitur et pingue oleique liquoris in Sicilia Agragantino fonte, inficiens rivum. incolae id harundinum paniculis colligunt, citissime sic adhaerescens, utunturque eo ad lucernarum lumina olei vice, item ad scabiem iumentorum. sunt qui et naphtham, de qua in secundo diximus volume, bituminis generibus adscribant, verum eius ardens natura et ignium cognata
180 procul ab omni usu abest. bituminis probatio ut quam maxime splendeat sitque ponderosum, graveolens;[1] atrum[2] modice, quoniam adulteratur pice. vis quae sulpuri: sistit, discutit, contrahit, glutinat. serpentes accensum nidore fugat. ad suffusiones

[1] graveolens *Mayhoff coll. Diosc.*: grave leve (lene *cd. Par.* 6801): graveolens, leve *Külb.*
[2] atrum *Mayhoff coll. Diosc.*: autem.

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[a] This occurs as a liquid (petroleum), as a liquid solid (mineral pitch and tar) and as a solid (asphalt).
[b] The Dead Sea.

showing that it contains a powerful abundance of fire. Thunderbolts and lightning also have a smell of sulphur, and their actual light has a sulphurous quality.

LI. Near to the nature of sulphur is also that of bitumen.[a] In some places it is a slime and others an earth, the slime being emitted, as we have said, from the lake[b] of Judaea and the earth being found in the neighbourhood of the seaside town of Sidon in Syria. Both of these varieties get thickened and solidify into a dense consistency. But there is also a liquid sort of bitumen, for instance that of Zacynthus and the kind imported from Babylon; at the latter place indeed it also occurs with a white colour. The bitumen from Apollonia also is liquid, and all of these varieties are called by the Greeks *pissasphalt*, from its likeness to vegetable-pitch and bitumen. There is also an unctuous bitumen, of the consistency of oil, found in Sicily, in a spring at Girgenti, the stream from which is tainted by it. The inhabitants collect it on tufts of reeds, as it very quickly adheres to them, and they use it instead of oil for burning in lamps, and also as a cure for scab in beasts of burden. Some authorities also include among the varieties of bitumen naphtha about which we spoke in Book II, but its burning property and liability to ignition is far removed from any practical use. The test of bitumen is that it should be extremely brilliant, and that it should be massive, with an oppressive smell; when quite black, its brilliance is moderate, as it is commonly adulterated with vegetable pitch. Its medical effect is that of sulphur, as it is astringent, dispersive, contractive, and agglutinating. Ignited it drives away snakes

Bitumen.

V, 72.

II, 235.

oculorum et albugines Babylonium efficax traditur, item ad lepras, lichenas pruritusque corporum. inlinitur et podagris. omnia autem eius genera incommodos oculorum pilos replicant, dentium
181 doloribus medentur simul nitro intrito. lenit[1] tussim veterem et anhelitus cum vino potum; dysintericis etiam datur eodem modo sistitque alvum. cum aceto vero potum discutit concretum sanguinem ac detrahit. mitigat lumborum dolores, item articulorum, cum farina hordeacia inpositum emplastrum peculiare facit suo nomine. sanguinem sistit, volnera colligit, glutinat nervos. utuntur etiam ad quartanas bituminis drachma et hedyosmi pari
182 pondere cum murrae obolo subacti. comitiales morbos ustum deprendit. volvarum strangulationes olfactu discutit cum vino et castoreo, procidentes suffitu reprimit, purgationes feminarum in vino potum elicit. in reliquo usu aeramentis inlinitur firmatque ea contra ignes. diximus et tingui solitum aes eo statuasque inlini. calcis quoque usum praebuit ita feruminatis Babylonis muris. placet in ferrariis fabrorum officinis tinguendo ferro clavorum capitibus et multis aliis usibus.

183 LII. Nec minor est aut adeo dissimilis aluminis opera, quod intellegitur salsugo terrae. plura et

[1] intrito. lenit *Mayhoff coll. Diosc.*: inlitum (*Sillig*) lenit *Detlefsen*: inlitus *B*: illitum *aut* illini *aut* inlini *rell.*

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[a] Several astringent substances were included in the word *alumen*, especially, it seems, aluminium sulphates, sulphate of iron, and common potash-alum; also kalinite, and perhaps also certain halotrichites (K. C. Bailey, *The Elder Pliny's Chapters on Chemical Subjects*, II, p. 233).

by its smell. Babylonian bitumen is said to be serviceable for cataract and film in the eye, and also for leprosy lichen and itch. It is also used as a liniment for gout; while all varieties of it are used to fold back eyelashes that get in the way of sight, and also to cure toothache, when smeared on with soda. Taken as a draught with wine it alleviates an inveterate cough and shortness of breath; and it is also given in the same way in cases of dysentery, and arrests diarrhoea. Drunk however with vinegar it dissolves and brings away coagulated blood. It reduces pains in the loins and also in the joints, and applied with barley-meal it makes a special kind of plaster that bears its name. It stops a flow of blood, closes up wounds, and unites severed muscles. It is employed also for quartan fevers, the dose being a dram of bitumen and an equal weight of wild mint pounded up with a sixth of a dram of myrrh. Burnt bitumen detects cases of epilepsy, and mixed with wine and beaver-oil its scent dissipates suffocations of the womb; its smoke when applied from beneath relieves prolapsus of the womb; and drunk in wine it hastens menstruation. Among other uses of it, it is applied as a coating to copper and bronze vessels to make them fireproof. We have stated that it also used to be the practice XXXIV, 15. to employ it for staining copper and bronze and coating statues. It has also been used as a substitute for lime, the walls of Babylon being cemented with it. In smithies also it is in favour for varnishing iron and the heads of nails and many other uses.

Alum.

LII. Not less important or very different is the use made of alum,[a] by which is meant a salt exudation from the earth. There are several varieties of

eius genera. in Cypro candidum et nigrius, exigua coloris[1] differentia, cum sit usus magna,[2] quoniam inficiendis claro colore lanis candidum liquidumque utilissimum est contraque fuscis aut obscuris nigrum.
184 et aurum nigro purgatur. fit autem omne ex aqua limoque, hoc est terrae exudantis natura. conrivatum hieme aestivis solibus maturatur. quod fuit ex eo praecox, candidius fit. gignitur autem in Hispania, Aegypto, Armenia, Macedonia, Ponto, Africa, insulis Sardinia, Melo, Lipara, Strongyle, laudatissimum in Aegypto, proximum in Melo. huius quoque duae species, liquidum spissumque. liquidi probatio ut sit limpidum lacteumque, sine offensis fricandi, cum quodam igniculo coloris.[3] hoc phorimon[4] vocant. an sit adulteratum, deprehenditur suco Punici mali; sincerum enim mixtura ea non nigrescit.[5] alterum genus est pallidi et scabri et quod inficiatur et[6] galla, ideoque hoc vocant

[1] coloribusque *B*: coloris visusque *coni. Mayhoff.*
[2] magna *Gelen*: magni.
[3] caloris *edd. vett.*
[4] phorimon *edd. vett. coll. Galen.*, κατὰ τόπους, vi. 3: porthmon *aut* portmon (*B*) *aut* pontinon *aut* posthonon.
[5] mixtura ea non nigrescit *K. C. Bailey*: mixtura ea nigrescit *cd. Flor. Ricc. ut videtur*: mixturam fugit *cd. Par.* 6801: mixtura *rell.*: mixtura inficitur *coni. Mayhoff.*
[6] et *Mayhoff*: a *B*: *om. rell.*

[a] Sulphate of aluminium would be useful for dyeing; potash-alum and alunogen could provide the bright colour, and alums containing metals the sombre colours (K. C. Bailey).
[b] Cf. XXXIII, 65; also for removing baleful influences of gold held above the head, cf. XXXIII, 84.
[c] Where potash-alum is found.

it. In Cyprus there is a white alum and another sort of a darker colour, though the difference of colour is only slight; nevertheless the use made of them is very different, as the white and liquid kind is most useful for dying woollens a bright colour whereas the black kind is best for dark or sombre hues.[a] Black alum is also used in cleaning[b] gold. All alum is produced from water and slime, that is, a substance exuded by the earth; this collects naturally in a hollow in winter and its maturity by crystallisation is completed by the sunshine of summer; the part of it that separates earliest is whiter in colour. It occurs in Spain, Egypt, Armenia, Macedonia, Pontus, Africa, and the islands Sardinia, Melos, Lipari[c] and Stromboli; the most highly valued is in Egypt and the next best in Melos. The alum of Melos also is of two kinds, fluid[d] and dense. The test of the fluid kind is that it should be of a limpid, milky consistency, free from grit when rubbed between the fingers, and giving a slight glow of colour[e]; this kind is called in Greek 'phorimon' in the sense of 'abundant.' Its adulteration can be detected[f] by means of the juice of a pomegranate, as this mixed with it does not turn it black if it is pure. The other kind[g] is the pale rough alum which may be stained with oak-gall also, and consequently this is called 'paraphoron,'

[d] Apparently the solid kind (potash-alum especially) in solution.

[e] So MSS.; *caloris* ('heat') is a change based on what is probably a corruption in the text of Dioscorides.

[f] That is, an alum supposedly free from iron would, if it contained iron, turn juice of pomegranate black.

[g] Probably light yellow halotrichite (hydrated iron sulphate with aluminium) and green vitriol (ferrous sulphate).

185 paraphoron. liquidi aluminis vis adstringere, indurare, rodere. melle[1] admixto sanat oris ulcera, papulas pruritusque. haec curatio fit in balneis II mellis partibus, tertia aluminis. virus alarum sudorisque sedat. sumitur pilulis contra lienis vitia pellendumque per urinam sanguinem. emendat et scabiem nitro ac melanthio admixtis.

186 Concreti aluminis unum genus σχιστὸν appellant Graeci, in capillamenta quaedam canescentia dehiscens, unde quidam trichitim potius appellavere. hoc fit e lapide, ex quo et aes—chalcitim vocant—, ut[2] sudor quidam eius lapidis in spumam coagulatus. hoc genus aluminis minus siccat minusque sistit umorem inutilem corporum, et auribus magnopere prodest infusum, vel inlitum et oris ulceribus dentibusque et si[3] saliva cum eo contineatur. et oculorum medicamentis inseritur apte verendisque utriusque sexus. coquitur in catinis,[4] donec liquari
187 desinat. inertioris est alterum generis, quod strongylen vocant. duae et eius species, fungosum atque omni umore dilui facile, quod in totum damnatur. melius pumicosum et foraminum fistulis spongeae simile rotundumque natura, candido propius, cum quadam pinguitudine, sine harenis, friabile, nec inficiens nigritia. hoc coquitur per se carbonibus

[1] melli *B*: melli admixtum *coni. Mayhoff.*

[2] vocant—, ut *Mayhoff*: vocant ut sit *edd. vett.*: vocamus *B*: vocatus *cd. Leid. Lips.*: vocatur *rell.*

[3] et si *Mayhoff*: et is *B*¹: et his *B*²: si *cd. Par.* 6801: et *rell.*

[4] catinis *B*: patinis *rell.*

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[a] The following medical uses are like the modern uses of potash-alum.

[b] Including potash-alum, halotrichite, etc.

[c] Both potash-alum and aluminium sulphate, if heated, melt, swell, and solidify into 'burnt alum.'

'perverted' or adulterated alum. Liquid alum[a] has an astringent, hardening and corrosive property. Mixed with honey it cures ulcers in the mouth, pimples and eruptions; this treatment is carried out in baths containing two parts of honey to one of alum. It reduces odour from the armpits and perspiration. It is taken in pills against disorders of the spleen and discharge of blood in the urine. Mixed with soda and chamomile it is also a remedy for scabies.

One kind[b] of solid alum which is called in Greek schiston, 'splittable,' splits into a sort of filament of a whitish colour, owing to which some people have preferred to give it in Greek the name of trichitis, 'hairy alum.' This is produced from the same ore as copper, known as copperstone, a sort of sweat from that mineral, coagulated into foam. This kind of alum has less drying effect and serves less to arrest the detrimental humours of the body, but it is extremely beneficial as an ear-wash, or as a liniment also for ulcers of the mouth and for the teeth, and if it is retained in the mouth with saliva; or it forms a suitable ingredient in medicines for the eyes and for the genital organs of either sex. It is roasted in crucibles until it has quite lost its liquidity.[c] There is another alum of a less active kind, called in Greek strongyle, 'round alum.' Of this also there are two varieties, the fungous which dissolves easily in any liquid and which is rejected as entirely worthless, and a better kind which is porous and pierced with small holes like a sponge and of a round formation, nearer white in colour, possessing a certain quality of unctuousness, free from grit, friable, and not apt to cause a black stain. This is roasted by itself on

188 puris, donec cinis fiat. Optimum ex omnibus quod Melinum vocant ab insula, ut diximus. nulli vis maior neque adstringendi neque denigrandi neque indurandi, nullum spissius. oculorum scabritias extenuat, combustum utilius epiphoris inhibendis, sic et ad pruritus corporis. sanguinem quoque sistit intus potum,[1] foris inlitum. evulsis pilis ex aceto inlinitur renascentesque mollit in languinem.
189 summa [2] omnium generum vis in adstringendo, unde nomen Graecis. ob id oculorum vitiis aptissima sunt, sanguinis fluctiones inhibent. cum adipe putrescentia ulcerum compescit [3]—sic et infantium ulcera [4] et hydropicorum eruptiones siccat—et aurium vitia cum suco Punici mali et unguium scabritias cicatricumque duritias et pterygia ac perniones, phagedaenas ulcerum ex aceto aut cum galla pari pondere cremata, lepras cum suco olerum, cum salis vero II partibus vitia, quae serpunt, lendes et
190 alia capillorum animalia aquae [5] permixtum. sic et ambustis prodest et furfuribus corporum cum sero picis. infunditur et dysintericis uvamque in ore comprimit ac tonsillas. ad omnia, quae in ceteris

[1] potum *Sillig, Ian*: totum *aut* tutum.
[2] *V.l.* summam.
[3] *Post* compescit *del.* cum adipe *K. C. Bailey.*
[4] sic . . . ulcera *supra ante* putrescentia *cd. Par.* 6801.
[5] aquae *coni. Ian, Sillig*: aque B^2: atque B^1: quae *cd. Leid. Lips.*: que *rell.*

[a] In § 184 Pliny implies that the best is the Egyptian.
[b] Στυπτηρία.

clean hot coals till it is reduced to ash. The best[a] of all kinds is that called Melos alum, after the island of that name, as we said; no other kind has a § 184. greater power of acting as an astringent, giving a black stain and hardening, and none other has a closer consistency. It removes granulations of the eyes, and is still more efficacious in arresting defluxions when calcined, and in that state also it is applied to itchings on the body. Taken as a draft or applied externally it also arrests haemorrhage. It is applied in vinegar to parts from which the hair has been removed and changes into soft down the hair that grows in its place. The chief property of all kinds of alum is their astringent effect, which gives it its name[b] in Greek. This makes them extremely suitable for eye troubles, and effective in arresting haemorrhage. Mixed with lard it checks the spread of putrid ulcers—so applied it also dries ulcers in infants and eruptions in cases of dropsy—and, mixed with pomegranate juice, it checks ear troubles and malformations of the nails and hardening of scars, and flesh growing over the nails, and chilblains. Calcined with vinegar or gallnuts to an equal weight it heals gangrenous ulcers, and, if mixed with cabbage juice, pruritus, or if with twice the quantity of salt, serpiginous eruptions, and if thoroughly mixed with water, it kills eggs of lice and other insects that infest the hair. Used in the same way it is also good for burns, and mixed with watery fluid from vegetable pitch for scurf on the body. It is also used as an injection for dysentery, and taken in the mouth it reduces swellings of the uvula and tonsils. It must be understood that for all the purposes which we have mentioned in the case of the other

generibus diximus, efficacius intellegatur ex Melo advectum. Ad[1] reliquos usus vitae in coriis lanisque perficiendis quanti sit momenti, significatum est.

191 LIII. Ab his per se ad medicinam pertinentia terrae genera tractabimus. Samiae II sunt, quae collyrium et quae aster appellantur. prioris laus ut recens sit ac lenissima[2] linguaeque glutinosa, altera glaebosior[3]; candida utraque. uritur, lavatur. sunt qui praeferant priorem. prosunt sanguinem expuentibus; emplastrisque, quae siccandi causa componuntur, oculorum quoque medicamentis miscentur.

192 LIV. Eretria totidem differentias habet, namque est alba et cinerea, quae praefertur in medicina. probatur mollitia et quod, si aere perducatur, violacium reddit colorem. vis et ratio eius in medendo dicta est inter pigmenta.

193 LV. Lavatur omnis terra—in hoc enim loco dicemus—perfusa aqua siccataque solibus, iterum ex aqua trita ac reposita, donec considat et digeri possit in pastillos. coquitur in calicibus crebro concussis.

194 LVI. Est in medicaminibus et Chia terra candicans. effectus eius idem[4] qui Samiae; usus ad mulierum maxime cutem. idem et Selinusiae. lactei coloris

[1] advectum. Ad *K. C. Bailey*: advectum nam ad *cdd.* *pro* nam *coni.* iam *Bailey.*

[2] lenissima *cdd.* (lenis *cd. Par.* 6801): levissima *Detlefsen, Urlichs*: levis *Hermolaus Barbarus.*

[3] glaebosior *Sillig*: glebosior *aut* globosior.

[4] eius idem *Mayhoff*: eiusdem.

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[a] Kaolinite or china-clay, which is sometimes found in fan-shaped (star-like) arrangements of plates, but generally in white, greyish, or yellowish masses (K. C. Bailey). The latter would be those used for eye-salves.

kinds the alum imported from Melos is more efficacious. It has been indicated how important it is for the other requirements of life in giving a finish to hides and woollens. § 183.

LIII. Next to these we will deal with the various kinds of earth which are connected with medicine. There are two sorts of Samos earth,[a] called collyrium, 'eye-salve,' and star-earth. The recommendation of the former is that it must be fresh and very soft and sticky to the tongue; the second is more lumpy; both are white in colour. The process is to calcine them and then to wash them. Some people prefer the former kind. They are beneficial for people spitting blood, and for plasters made up for drying purposes, and they are also used as an ingredient in medicines for the eyes.

Uses of various earths.

Samian.

LIV. Earth of Eretria[b] has the same number of varieties, as one is white and one ash-coloured, the latter preferred in medicine. It is tested by its softness and by its leaving a violet tint if rubbed on copper. Its efficacy and the method of using it as a medicine have been spoken of among the pigments. § 38.

Eretrian.

LV. All these earths—we will mention it in this place—are washed by having water poured over them and dried in the sun, and then after being put in water again ground up and left to stand, till they settle down and can be divided into tablets. They are boiled in cups that are repeatedly well shaken.

LVI. White earth[c] of Chios is also among medicaments; its effect is the same as that of Samos earth. It is specially used as a cosmetic for the skin of women, and Selinunte earth is used in the same way. The latter is of the colour of milk, and it

Chian and other earths.

[b] Cf. §§ 30, 38. [c] Some kind of china-clay.

haec et aqua dilui celerrima[1]; eadem lacte diluta tectoriorum albaria interpolantur. pnigitis[2] Eretriae simillima est, grandioribus tantum glaebis glutinosaque. effectus eius idem qui Cimoliae, infirmior tantum. bitumini simillima est ampelitis.[3] experimentum eius, si cerae modo accepto oleo liquescat et si nigricans colos maneat tostae. usus ad molliendum discutiendumque, et ad haec medicamentis additur, praecipue in calliblepharis et inficiendis capillis.

195 LVII. Cretae plura genera. ex iis Cimoliae duo ad medicos pertinentia, candidum et ad purpurissum inclinans. vis utrique ad discutiendos tumores, sistendas fluctiones aceto adsumpto. panos quoque et parotidas cohibet et lienem inlita pusulasque, si vero aphronitrum et cyprum[4] adiciatur et acetum, pedum tumores ita, ut in sole curatio haec fiat et
196 post VI horas aqua salsa abluatur. testium tumoribus cypro et cera addita prodest. et refrigerandi quoque natura cretae est, sudoresque immodicos sistit inlita atque ita papulas cohibet ex vino adsumpta in balineis. laudatur maxime Thessalica. nascitur et in Lycia circa Bubonem, Est et alius Cimoliae usus in vestibus. nam Sarda

[1] celerrima *edd. vett.*: ceterrima *aut* ceterum (teterrima *cd. Par. Lat.* 6797).
[2] pnigitis *Hermolaus Barbarus*: phinicis *aut* pnitis *aut sim.*
[3] ampelitis *Hermolaus Barbarus*: appellitis.
[4] cyprium *cd. Par.* 6801: cyprus *Brotier*: nitrum *Gelen.*

[a] The word means any fullers' earths, here particularly calcium montmorillonite from the island Argentiera or Cimolo in the Aegean.

[b] ἀφρόνιτρον, more properly ἀφρὸς νίτρου, 'foam of soda'; probably pure soda or possibly partly causticised soda, whereas ordinary *nitrum* was carbonate of soda.

[c] Obtained from the flowers of *Lawsonia alba.*

dissolves very quickly in water, and likewise dissolved in milk it is used for touching up the whitewash on plastered walls. Pnigitis, or 'suffocating' earth closely resembles that of Eretria, only it is in larger lumps and is sticky. It produces the same effect as Cimolian earth, although it is less powerful. Ampelitis or 'vine' earth is very like bitumen. The test for it is whether it dissolves when oil is put in it, like wax, and whether when roasted it retains a blackish colour. It is used for an emollient and dissipant, and is added to drugs for these purposes, especially in the case of eye-lash beautifiers and for hair dyes.

Asphaltic deposit.

LVII. There are several sorts of white earth. Among them there are two sorts of Cimolian earth [a] that concern doctors, one bright white and one inclining to purple. Either is effective for dispelling tumours, and, with vinegar added, for stopping fluxes. They also check swellings and inflammation of the parotid glands, and applied as a liniment, troubles of the spleen and pimples; while if foam-soda [b] and oil of cypros [c] and vinegar are added, they cure swollen feet, provided the treatment is applied in the sun, and the application is washed off again with salt water six hours later. A mixture of this earth with oil of cypros and wax is good for swellings of the testicles. Cretaceous earth also possesses cooling properties, and applied in a liniment it stops immoderate sweating, and likewise taken in wine while in a bath it removes pimples. The kind from Thessaly is most esteemed, but it is also found in the neighbourhood of Bubo in Lycia. Another use also made of Cimolus earth is in regard to cloth. The kind called Sarda, which is brought

Cimolian earths.

quae adfertur e Sardinia, candidis tantum adsumitur, inutilis versicoloribus, et[1] est vilissima omnium Cimoliae generum; pretiosior Umbrica et quam
197 vocant saxum. proprietas saxi quod crescit in macerando; itaque[2] pondere emitur, illa mensura. Umbrica non nisi poliendis vestibus adsumitur. neque enim pigebit hanc quoque partem adtingere, cum lex Metilia extet fullonibus dicta, quam C. Flaminius L. Aemilius censores dedere ad populum
198 ferendam. adeo omnia maioribus curae fuere. ergo ordo hic est: primum abluitur vestis Sarda, dein sulpure suffitur, mox desquamatur Cimolia quae est coloris veri. fucatus enim deprehenditur nigrescitque et funditur sulpure, veros autem et pretiosos colores emollit Cimolia et quodam nitore exhilarat contristatos sulpure. candidis vestibus saxum utilius a sulpure, inimicum coloribus. Graecia pro Cimolia Tymphaico[3] utitur gypso.

199 LVIII. Alia creta argentaria appellatur nitorem argento reddens, set vilissima qua circum praeducere ad victoriae notam pedesque venalium trans maria advectorum denotare instituerunt maiores; talemque

[1] ea *coni. Mayhoff.* [2] itaque *Mayhoff*: atque.
[3] Tymphaico *Hermolaus Barbarus coll. Theophr.*: tympaigo *B*: tympauco *rell.*

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[a] Sarda would be strong calcium montmorillonite; Umbrian earth, some kaolinite; and *saxum*, bentonite. Cf. R. H. S. Robertson, *Class. Rev.*, LXIII, 51–3. K. C. Bailey thinks *saxum* is quicklime. [b] Cf. § 44.

from Sardinia, is only used for white fabrics, and is of no use for cloths of various colours; it is the cheapest of all the Cimolus kinds; more valuable are the Umbrian and the one called 'rock.'[a] The peculiarity of the latter is that it increases in size when it is steeped in liquid; consequently it is sold by weight, whereas Umbrian is sold by measure. Umbrian earth is only employed for giving lustre to cloths. It will not be out of place to touch on this part of the subject also, as a Metilian law referring to fullers still stands, the law which Gaius Flaminius and Lucius Aemilius as censors put forward 220 B.C. to be carried in parliament: so careful about everything were our ancestors. The process then is this: the cloth is first washed with earth of Sardinia, and then it is fumigated with sulphur, and afterwards scoured with Cimolian earth provided that the dye is fast; if it is coloured with bad dye it is detected and turns black and its colour is spread by the action of the sulphur; whereas genuine and valuable colours are softened and brightened up with a sort of brilliance by Cimolian earth when they have been made sombre by the sulphur. The 'rock' kind is more serviceable for white garments, after the application of sulphur, but it is very detrimental to colour. In Greece they use Tymphaea gypsum instead of Cimolian earth.

Silversmiths' earth.

LVIII. There is another cretaceous earth[b] called silversmiths' powder as used for polishing silver; but the most inferior kind is the one which our ancestors made it the practice to use for tracing the line indicating victory in circus-races and for marking the feet of slaves on sale that had been imported from over-seas; instances of these being

Publilium Antiochium,[1] mimicae scaenae conditorem, et astrologiae consobrinum eius Manilium Antiochum, item grammaticae Staberium Erotem

200 eadem nave advectos videre proavi. sed quid hos referat aliquis, litterarum honore commendatos? talem in catasta videre Chrysogonum Sullae, Amphionem Q. Catuli, Hectorem [2] L. Luculli, Demetrium Pompei, Augenque Demetri, quamquam et ipsa Pompei credita est, Hipparchum M. Antoni, Menam et Menecraten Sexti Pompei aliosque deinceps, quos enumerare iam non est, sanguine

201 Quiritium et proscriptionum licentia ditatos. hoc est insigne venaliciis gregibus obprobriumque insolentis fortunae. quos et nos adeo potiri rerum vidimus, ut praetoria quoque ornamenta decerni a senatu iubente Agrippina Claudi Caesaris videremus tantumque non cum laureatis fascibus remitti illo, unde cretatis pedibus advenissent.

[1] Antiochium *O. Jahn*: lucilium *cd. Par.* 6801: lochium *rell.*

[2] Hectorem *Urlichs, Detlefsen*: interfectorem *cd. Par. Lat.* 6797, *cd. Tolet.*: rectorem *rell.*: interfectorem, Heronem *edd. vett.*: Heronem *ed. Basil.*

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[a] This would be Publilius Syrus, fl. *c.* 45 B.C.

[b] Probably father or grandfather of Manilius who wrote the extant *Astronomica.*

[c] Teacher of Brutus and Cassius.

[d] From the period 80–30 B.C.

[e] Demetrius of Gadara whose native city, destroyed by the Jews, was rebuilt by Pompey at Demetrius' request.

Publilius of Antioch[a] the founder of our mimic stage and his cousin Manilius[b] Antiochus the originator of our astronomy, and likewise Staberius Eros[c] our first grammarian, all of whom our ancestors saw brought over in the same ship. But why need anybody mention these men, recommended to notice as they are by their literary honours? Other instances[d] that have been seen on the stand in the slave market are Chrysogonus freedman of Sulla, Amphion freedman of Quintus Catulus, Hector freedman of Lucius Lucullus, Demetrius[e] freedman of Pompey, and Auge freedwoman of Demetrius, although she herself also was believed to have belonged to Pompey; Hipparchus freedman of Mark Antony, Menas[f] and Menecrates freedmen of Sextus Pompeius, and a list of others whom this is not the occasion to enumerate, who[g] have enriched themselves by the bloodshed of Roman citizens and by the licence of the proscriptions.[h] Such is the mark set on these herds of slaves for sale, and the disgrace attached to us by capricious fortune!—persons whom even we have seen risen to such power that we actually beheld the honour of the praetorship awarded to them by decree of the Senate at the bidding of Claudius Caesar's wife Agrippina,[i] and all but sent back with the rods of office wreathed in laurels to the places from which they came to Rome with their feet whitened with white earth![j]

[f] Admiral of Sextus Pompeius *c.* 40 B.C. He deserted twice to Octavian. Hipparchus likewise deserted to Octavian. Menecrates killed himself after ill success under Menas against Octavian's fleet, 38 B.C.

[g] Especially Chrysogonus and perhaps Hipparchus.

[h] By Sulla in 82 and by Antony, Octavian, Lepidus in 43 B.C.

[i] She married Claudius in A.D. 49.

[j] See § 199.

202 LIX. Praeterea sunt genera terrae proprietatis suae, de quibus iam diximus, sed et hoc loco reddenda natura: ex Galata insula et circa Clupeam Africae scorpiones necat, Baliaris et Ebusitana serpentes.

Note on the Painters Named Aristides.

It would appear that an elder Aristides (XXXV. 75, 108, 111, and 122?—the statuary of XXXIV. 50 and 72 may be the same) had as pupils his sons Nicomachus (XXXV. 108, 109), Niceros (111) and Ariston (110, 111), and two others (not sons), namely Euphranor (111, 128) and Antorides (111).

LIX. Moreover there are other kinds of earth with a special property of their own about which we have spoken already, but the nature of which must again be stated here: soil taken from the island of Galata and in the neighbourhood of Clupea in Africa kills scorpions, and that of the Balearic Islands and Iviza is fatal to snakes. III, 78 V, 42.

Note however that the reading *Aristidis* in XXXV. 108 is uncertain and that Nicomachus is not mentioned in 111. Nicomachus had a son and pupil the younger Aristides (A. of Thebes 98–100, 110) who was thus grandson of A. the elder. The younger is named also in XXXV. 24, and VII. 126. Pliny shows some confusion of the two.

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